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**SITE ASSESSMENT REPORT
AND CORRECTIVE ACTION PLAN**

Former Chevron Service Station #9-2795
Project No. MTCH.92795.08
6051 El Tordo
Rancho Santa Fe, California
APN # 266-283-03-00
DEH Case # H36819-002
April 13, 2005

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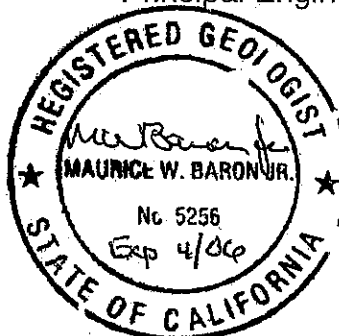
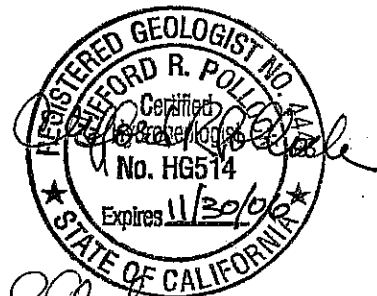


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SITE IDENTIFICATION INFORMATION

Address:	6051 El Tordo Rancho Santa Fe, California
Business:	Castle Creek Capitol and Romar Company
APN:	266-283-03-00
DEH Case No.:	H36819-002
Property Owner:	Rancho Santa Fe National Bank 38325 Highway 190 Springville, California 93265
UST Owner:	None
UST Operator:	None
Contact Person:	Dana Thurman
Responsible Party:	Chevron Environmental Management Company 145 South State College Boulevard, Suite 400 Brea, California 92822-2292

1.0 INTRODUCTION

1.1 PURPOSE

The first seven sections of this document present the results of site assessment activities completed by SECOR International, Incorporated (SECOR) at a location hydraulically down gradient from the former Chevron service station (9-2795) located at 6051 El Tordo in Rancho Santa Fe, California (the Site). Section 7.0 presents a Corrective Action Plan (CAP) to address remediation of gasoline-range petroleum hydrocarbon-impacted soil and ground water associated with the Site and the area of impacted ground water adjacent to the Site, the Off Site area. The location of the Site is presented on Figure 1.

The purpose of the site assessment was to further evaluate the lateral extent of hydrocarbon-impacted soil and groundwater down gradient of the Site. Field activities were conducted in accordance with SECOR's *Work Plan to Perform Additional Site Assessment*, dated July 8, 2003 (the Work Plan); and the County of San Diego, Department of Environmental Health, Land and Water Quality Division (LWQD), Site Assessment and Mitigation Program (SAM) Work Plan approval letter, dated August 20, 2003.

1.2 SCOPE OF SERVICES

The following scope of services was performed during the assessment:

- Prepared a site-specific Health and Safety Plan to address potential health and safety hazards at the site during assessment activities;
- Obtained a drilling permit from the LWQD for the advancement of one (1) soil boring and subsequent construction of one (1) groundwater monitoring well;
- Met with utility representatives to identify and mark locations of subsurface utilities;
- Drilled one soil boring (MW-10) to a total depth of approximately 40 feet below ground surface (ft bgs);
- Collected one (1) soil sample from the soil boring location; analyzed the sample for total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene and total xylenes (collectively, BTEX); Ethyl tert-Butyl Ether (ETBE), Methyl tert-butyl Ether (MTBE), tert-Butanol (TBA), tert-Amyl Methyl Ether (TAME), and Di-isopropyl Ether (DIPE) using United States Environmental Protection Agency (EPA) Method 8260B; (see Table 1);
- Constructed one (1) two-inch (in) diameter groundwater monitoring well in boring MW-10;
- Developed well MW-10; purged 10 groundwater monitoring wells (MW-1 through MW-10); collected representative groundwater samples from each well; and analyzed groundwater samples collected from monitoring wells MW-1 through MW-

10 for TPHg, BTEX, MTBE, TBA, DIPE, ETBE, and TAME using EPA Method 8260B; (see Table 2);

- Surveyed the location of the well casing and the elevation of the top of the new well casing to within ± 0.01 foot accuracy relative to mean sea level (MSL) and;
- Prepared this report to include a discussion of site assessment field procedures, findings and conclusions; the aforementioned CAP; and a proposed implementation schedule for the recommended remedial alternative.

2.0 BACKGROUND INFORMATION

2.1 SITE DESCRIPTION

The Site is a former Chevron gasoline service station property located on the southeast corner of the intersection of El Tordo Road and La Granada Road in Rancho Santa Fe, California. A Site Plan is presented as Figure 2, and a Site Plan Detail (at 1-inch = 40 feet scale) is presented as Figure 3. The Site currently is occupied by a commercial office building and an associated parking lot. Properties adjacent to the Site, and in the immediate vicinity, are primarily commercial with some residential areas. However, two public schools are located between 750 feet (ft) and 1,100 ft northwest, both hydraulically down gradient, of the Site.

The United States Geological Survey (USGS) Rancho Santa Fe, California 7.5-minute quadrangle topographic map (USGS, 1967; photorevised 1975) indicates the Site is located approximately 230 ft above MSL. The Site is located approximately one mile northwest of the San Dieguito River. Hills rise to elevations greater than 300 ft above MSL to the southwest and northeast of the Site. The Rancho Santa Fe Golf Club is located 1.4 miles (mi) northwest and north of the Site, within a small valley.

2.2 SITE BACKGROUND

2.2.1 Subsurface Soil Assessment

Based on historical research, the Site had an unauthorized release (SAM Number H36819-001) assigned to it, stemming from an environmental investigation associated with a real estate transaction. That case was closed and a subsequent case (SAM Number H36819-002) was opened, and is the case that is being investigated and is discussed within this report.

In January 1997, a Phase I and Limited Phase II Environmental Site Assessment (ESA) was performed for the Site by Geotechnical and Environmental Consultants (Geocon), for the Romar Company (Romar) of Kansas City Missouri. The ESA report (February 20, 1997) indicates that records and databases accessed during the ESA show that the Site was an operating gasoline service station from at least 1960 until 1979. The underground storage tanks (USTs), product piping, dispensers, and waste oil UST were presumably removed during station decommissioning in 1979. Land use subsequently changed to commercial office space with the construction of the current Site building in 1980. Historical release(s) of gasoline to the subsurface at the Site apparently occurred during its use for retail gasoline storage and sales, but apparently the effects of the releases did not impede construction of the existing improvements. Geocon and Alton Geoscience (AG) defined the release(s) to the soil that were limited mainly to the former UST excavation area (Geocon, 1997a).

The limited Phase II portion of the investigation (February 6, 1997) included the drilling of six (6) soil borings (B-1 through B-6) across the Site, focusing on the areas that formerly housed the dispenser islands, the former USTs, the site structure, and the former oil cleanout (Figures 2 and 3). The borings ranged in depth from approximately 8 ft bgs to

approximately 20 ft bgs. Soil samples were collected at approximately 5 ft intervals, and sent for laboratory analysis. TPHg concentrations ranged from below laboratory method detection limit (LMDL) of 1.0 milligrams per kilogram (mg/kg) to 2,300 mg/kg in B-2 at 10 ft bgs. Benzene concentrations ranged from below the LMDL of 5 micrograms per kilogram (µg/kg) to 41,300 µg/kg in B-3 at 20 ft bgs. Total petroleum hydrocarbons, quantified as diesel (TPHd), concentrations ranged from below an LMDL of 10 mg/kg to 424 mg/kg in B-2 at 15 ft bgs. The elevated TPHg, TPHd, and benzene soil concentrations were located in the area where the former UST and dispenser island were reportedly located. It was noted in the ESA report that while soil samples contained hydrocarbons in the diesel range, the chromatogram did not match the pattern for diesel. Soil samples were not analyzed for MTBE (Geocon, 1997a).

Between April 1 and April 3, 1997 Geocon supervised the drilling of six (6) exploratory soil borings (B-7 thru B-9 and MW-1 thru MW-3) across the Site (Figures 2 and 3). Three (3) of the borings were subsequently used to construct monitoring wells (MW-1 thru MW-3). The soil borings ranged in depth from approximately 20 to approximately 53 ft bgs. Soil samples were collected at approximate 5 ft intervals for laboratory analysis. TPHg concentrations ranged from below an LMDL of 1 mg/kg to 4,000 mg/kg in MW-1 at 15 ft bgs. Benzene concentrations ranged from below an LMDL of 50 µg/kg to 15,000 µg/kg in MW-1 at 15 ft bgs. MTBE was not detected at LMDLs ranging from 100 µg/kg to 200,000 µg/kg in any of the soil samples submitted for laboratory analysis. A Human Health Risk Assessment (HHRA) was also performed by Geocon per Risk-Based Corrective Action (RBCA) ASTM E-1739-95. The HHRA results indicated that the soil impact present beneath the Site would not present a soil vapor hazard to users of the Site. The nearest groundwater production well was located approximately 4,000 ft south-southeast (up gradient) of the Site in the Osuna Valley. The closest water production well to the Site was located approximately 2-1/4 miles down gradient from the Site (Geocon, 1997b).

On June 16 and 17, 1998, AG oversaw the installation of three (3) monitoring wells (MW-4 thru MW-6) at off-site and down gradient locations from the Site and the re-installation of MW-1 (Figures 2 and 3). MW-1 was reinstalled to provide for a longer screen interval. The new wells were installed to approximately 25 ft bgs. Soil samples were collected at approximately 5 ft intervals and submitted for laboratory analysis. TPHg was not detected above an LMDL of 10 mg/kg in any of the soil samples submitted for laboratory analysis. Benzene concentrations ranged from below an LMDL of 50 mg/kg to 0.38 mg/kg in the 25 ft sample collected from MW-5. MTBE, at an LMDL of 35 µg/kg, was not detected in any of the soil samples submitted for laboratory analysis (Alton Geoscience, 1998).

In October 2000, SECOR met with Mr. Jim Schuck, who is the SAM project manager, to evaluate the closure potential of the Site. The participants agreed that the following activities needed to be completed before the case closure issue could be evaluated: 1) installation and sampling of three additional off-site groundwater monitoring wells; and 2) performance of a soil vapor risk assessment. These activities were completed in 2001 and are described below and in Section 2.2.4 of this report.

On October 24, 2001, SECOR supervised the installation of three (3) monitoring wells (MW-7 through MW-9) at off-site and downgradient locations (Figure 2) from the Site. The new wells were installed to approximately 28 ft bgs. Soil samples were collected at approximate

5 ft intervals and submitted for laboratory analysis. TPHg and benzene were not detected above their respective LMDLs of 10 mg/kg and 0.050 µg/kg in any of the soil samples submitted for analysis. MTBE (EPA Method 8021B) was detected in two (2) samples submitted for laboratory analysis in MW-7 at 15 ft bgs and MW-8 at 15 ft bgs at 0.041 mg/kg and 0.059 mg/kg, respectively. MTBE concentrations were confirmed using EPA Method 8260B that indicated that MTBE was not detected above the 10 µg/kg detection limit (SECOR, 2003).

2.2.2 Groundwater Conditions Assessment

According to the State Water Resources Control Board (SWRCB), the Site and the impacted ground water area offsite and downgradient from the Site are located in the Rancho Santa Fe Hydrologic Subarea of the Solana Beach Hydrologic Area within the San Dieguito Hydrologic Unit. According to the SWRCB, ground water within the San Dieguito Hydrologic Unit is produced from alluvium and the La Jolla Formation in the coastal plain section. Irrigation use ratings are mainly inferior because of high electrical conductivity and high chloride ion concentrations. Domestic use ratings are largely inferior because of high total dissolved solids (TDS) and sulfate ion concentrations (Geocon 1997a).

On April 29, 1997, Geocon measured depth to water (DTW) and purged and sampled the three (3) on-site wells, MW-1 thru MW-3. DTW ranged from 15.71 feet below top of casing (bTOC) to 18.68 ft bTOC. The calculated ground water gradient was oriented toward the west at approximately 0.029 feet per foot (ft/ft). TPHg concentrations ranged from 4,700 µg/L (MW-2) to 130,000 µg/L (MW-1). Benzene concentrations ranged from 360 µg/L (MW-2) to 18,000 µg/L (MW-1). MTBE was not detected (less than (<) 50 µg/L) in the sample collected from MW-1 and analyzed for MTBE using EPA Method 8240. Additional groundwater information contained in the Geocon report (Geocon, 1997b) indicated that analytical results for salinity from two test wells at the Rancho Santa Fe Golf and Tennis Club (the Golf Club) indicated 2,300 to 2,700 parts per million (ppm) and 2,900 to 4,000 ppm, per conversations with Mr. Pete Smith (associate manager of the Club) and Mr. Tim Barrier (golf course greens keeper at the Golf Club), respectively. Additionally, a conversation with Mr. Larry Newcomb (County of San Diego Department of Environmental Health) indicated that water quality in the Rancho Santa Fe area varied and that TDS in the groundwater ranged from 3,000 ppm to 30,000 ppm (Geocon, 1997b).

On July 9, 1998, groundwater monitoring of wells MW-1 through MW-6 (entailing DTW measurements, purging, and sampling of ground water) was performed. The calculated groundwater gradient was oriented toward the west-northwest at approximately 0.04 ft/ft. TPHg concentrations ranged from below an LMDL of 500 µg/L to 150,000 µg/L (MW-1). Benzene concentrations ranged from below an LMDL 2.0 µg/L to 20,000 µg/L (MW-1). MTBE concentrations were not detected above an LMDL of 5.0 µg/L in any of the samples submitted for laboratory analysis (Alton Geoscience, 1998). On March 29, 1999, the Site was incorporated into a quarterly monitoring schedule, and it has generally been sampled on a quarterly basis thereafter.

Historical groundwater physical parameters (specific conductivity, ph, etc.) for monitoring of groundwater quality at the Site indicate that the groundwater has a high TDS content and that an area of low groundwater pH is present in the interior of the groundwater impact

plume. The lowest pH in the plume on May 13, 2004 was 3.5 standard units at well MW-9, while the pH at MW-10 (outside the plume) was 5.9 standard units. On August 2, 2004, the highest pH was 6.0 standard units at MW-10 (outside the plume) and 3.4 standard units at MW-4 (inside the plume). On November 4, 2004, the highest pH was 6.0 standard units at MW-10 (outside the plume) and 3.4 standard units at MW-4 (inside the plume). The Rancho Santa Fe Mobil station (situated 1/3-mile upgradient from the Site) also exhibits low pH in groundwater samples.

TBA has been detected as early as August 8, 2000 (MW-4; Table 2) in the groundwater samples collected from wells at the Site and from wells in the impacted groundwater plume that are off-site (downgradient) of the Site. Analytical results for MTBE analysis have not indicated detectable concentrations of MTBE in the ground water in the area of the suspected release at the Site. Therefore, it appears that the TBA impact to ground water at the Site and downgradient from the Site (offsite) is related to the use of TBA as a fuel oxygenate in gasoline dispensed at the Site prior to the decommissioning of the station.

SECOR believes that the presence of TBA in the impacted ground water at the Site and offsite (downgradient) from the Site does not appear to pose any adverse health risks to humans or to the environment. TBA is not currently listed as a priority contaminant for cleanup. Additionally, ground water in the impacted aquifer is characterized by elevated TDS concentrations and low pH in the groundwater plume associated with the Site vicinity. SECOR further notes that the aquifer is low yielding (well purging records), and that the Santa Fe Irrigation District (SFID) has no current plans to develop the shallow ground water in the vicinity of the Site as a source of drinking water.

2.2.3 First Human Health Risk Assessment

In 1997, Geocon performed a Tier 1 and Tier 2 HHRA for the Site to determine if significant risks to human health existed at that time from the impacted soil and groundwater at the Site. The HHRA was accomplished by following the American Society for Testing and Materials (ASTM) standard for Risk Based Corrective Action (RBCA), ASTM Designation E-1739-95. Based on the health risk calculations, Tier 1 commercial risk-based screening levels (RBSLs) or Tier 2 commercial site specific target levels (SSTLs), for the exposure pathways for inhalation of soil and groundwaters within the on-site structure and inhalation of soil vapors in outdoor air, were not exceeded for the constituents of concern (BTEX). Therefore, it was determined that the petroleum hydrocarbon impacted soil and ground water under the Site did not pose a significant risk to human health.

BTEX concentrations in the subsurface soil exceeded the Tier 2 SSTLs for soil leaching into ground water causing dissolved concentrations of BTEX to possibly exceed Maximum Contaminant Levels (MCLs) and potential ingestion of BTEX impacted water should a water production well be installed at the Site. Based on current and planned future site usage, ground water beneath the Site will not be utilized as a source of drinking water indicating that impact to the ground water did not pose a significant threat to human health (Geocon, 1997b).

2.2.4 Second Human Health Risk Assessment and Soil Vapor Survey

SECOR performed a HHRA modeling to evaluate the potential excess cancer risk posed by subsurface benzene vapor to workers at the commercial office building located on the Site. The risk assessment modeling was performed using benzene vapor concentrations obtained from analyses of soil vapor samples collected by SECOR on October 19, 2001 from six soil vapor probes (HA1 thru HA6) located around the perimeter of the site building. A total of 11 vapor samples were collected from approximately 1 ft bgs and 4.5 ft bgs, with the exception of one sample, HA3-5, that was collected from 5 ft bgs. The soil vapor samples were submitted to an on-site mobile laboratory for analysis of TPHg, BTEX, DIPE, ETBE, TAME, MTBE, and TBA using EPA Method 8260B.

Laboratory analytical results indicated that none of the soil vapor samples contained TPHg, BTEX, DIPE, ETBE, TAME, TBA, or MTBE at concentrations greater than or equal to the respective LMDL.

SECOR used the benzene soil vapor sample analytical data to estimate the potential excess cancer risk to humans resulting from diffusion of benzene vapor (the selected target compound) from hydrocarbon-impacted soil and ground water, through the vadose zone and into the commercial office building that is built on a typical slab-on-grade foundation. The benzene vapor concentrations in the shallowest (1 ft bgs) samples were averaged to derive a single value for running the SAM Vapor Risk Model (November 1999 version; revised December 20, 2000). Where actual analytical concentrations were less than the laboratory detection limit, a detection limit of 1 µg/L-vapor was used to calculate the average benzene soil vapor concentration.

In accordance with the current and foreseeable future use of the site, conservative SAM commercial/industrial worker exposure criteria were used. The soil vapor migration and risk assessment calculations were performed using the SAM Vapor Risk Assessment Model (November 1999 version; revised December 20, 2000). The calculations were completed using the SAM default and site-specific parameters. Cancer risk calculations using the resulting benzene room concentration (Ci) estimate were performed using equations from EPA Risk Assessment Guidance (RAG) for Superfund Sites (EPA, 1989).

The potential cancer risk to humans from benzene vapor in the Site building was calculated to be 7.75E-08, equating to a cancer probability of approximately 1 in 13,000,000. This calculated potential cancer risk to humans is significantly less than the one-in-one-million (1 in 1,000,000) risk that has been selected by the SAM as an indicator of concern for human health. These results indicate that the benzene dissolved in ground water, both beneath the Site and in the impacted groundwater plume off-site, does not appear to pose a significant threat to human health (SECOR, 2003).

2.2.5 Subsurface Utility Survey

In 1998, AG completed a utility survey of the Site area as part of the Site assessment activities at the site. The utility map includes the locations of sewer, water, telephone, cable television, and electrical lines as well as the locations of overhead lines, transformers, and manholes/utility boxes. Several utility lines were determined to be present, at depths ranging from approximately 3 to 7 ft bgs, in the Site vicinity. Based on the depth and the locations of the utilities and the depth to first water (impacted) at approximately 15 ft bgs, the utility trenches do not appear to provide a conduit for migration of vapor-phase gasoline-range hydrocarbons. A copy of the utility survey map is presented as Figure 4.

2.2.6 Sensitive Receptor Research

In 2002, SECOR conducted a limited sensitive receptor survey (SRS) to collect data concerning the irrigation water supply (agricultural wells) supposedly located at the Golf Club. The research indicated that the identified potential receptors (agricultural wells) can be discounted based on their location and distance from the leading edge of the groundwater plume (SECOR, 2003). Additional findings of the report are discussed below.

2.2.7 Groundwater Utilization Research

The SFID supplies municipal (potable) water to the area of the Site. The SFID purchases a majority of its water (approximately 95 percent) from two San Diego County Water Authority (SDCWA) aqueduct systems. One system delivers water from the Colorado River. The other system delivers water from rivers in the Sierra Nevada Mountain Range and the Sacramento-San Joaquin Delta in Northern California. The remainder of the water distributed by the SFID is purchased from local sources that include rain and snowfall runoff collected in local reservoirs owned and operated by other water agencies. The SFID does not own or lease any water production. Based on previous research, the aquifer is not currently being used for ground water production, and there are no immediate plans to do so based on high levels of salinity and TDS (Geocon, 1997b).

2.2.8 Water Production Well Records

The Site and the impacted groundwater offsite is not located within a designated SDCWA "sensitive aquifer area" according to a Regional Water Quality Control Board (RWQCB) map (SDCWA, 1996) and there are no known water production wells located within a ½-mile radius according to the USGS and California Department of Water Resources (DWR) databases. According to County of San Diego Department of Environmental Health (DEH) records, there are two irrigation water supply wells located at the Rancho Santa Fe Golf Club (downgradient) approximately 1.4 miles northwest of the Site.

2.2.9 Rancho Santa Fe Golf Club Irrigation Wells

SECOR contacted Mr. Tim Barrier, Golf Superintendent for the Golf Club, and arranged to inspect the locations of the two (2) agricultural wells documented in the DEH database and

previously mentioned in the Geocon May 1997 Site Investigation Report. Mr. Barrier indicated that two exploratory soil borings had been drilled in 1991 to evaluate groundwater production capability and quality, but that the borings were never completed as groundwater production wells. Mr. Barrier recalled that as result of poor groundwater quality, primarily due to high TDS and total suspended solids (TSS) content, the boreholes were never cased. Mr. Barrier indicated that the borings had been drilled before he was with the Club and that he would make Mr. Sebastian Figueroa of his staff available for questions during SECOR's visit to the Club. Mr. Barrier indicated that he was unable to locate any records associated with the exploratory boreholes.

The information contained in the Geocon May 1997 report indicated that analytical results for salinity from two test wells at the Club indicated 2,300 to 2,700 ppm and 2,900 to 4,000 ppm, per conversations with Mr. Pete Smith (then associate manager of the Club) and Mr. Tim Barrier (greens keeper at the Club), respectively. Additionally, a conversation with Mr. Larry Newcomb DEH indicated that TDS in the groundwater in the area of Rancho Santa Fe range from 3,000 ppm to 30,000 ppm (Geocon, 1997b). SWRCB information indicates that the groundwater in the area of Rancho Santa Fe contains high TDS and sulfate concentrations.

During SECOR's site visit to the Golf Club (January 17, 2002), Mr. Figueroa indicated that he, over a period of approximately three weeks, had observed the drilling of three borings on the Golf Club property in 1991. Mr. Figueroa provided a tour of the Golf Club grounds that included the location of the three borings. The first boring location was observed in the driveway leading to the golf course maintenance office. Mr. Figueroa pointed out a second boring location on the opposite side of the driveway approximately 40 ft west of the first location. Mr. Figueroa pointed out a third exploratory boring location south of the golf cart path near Hole 11. Additionally, Mr. Figueroa confirmed that there are no existing water production wells at the Golf Club, although he indicated that at one time there was a well located on the edge of the golf course immediately north of the intersection of Mimosa and La Granada. The well was at one time used to irrigate the golf course and to supply the old clubhouse. There are no USGS, DWR, or DEH records associated with the former water supply well Mr. Figueroa alluded to that were accessible to SECOR.

2.2.10 Current Site Investigation

The current site investigation activities include the installation of one (1) off-site and down gradient groundwater monitoring well (MW-10), and the incorporation of the newly installed monitoring well into the groundwater monitoring program. The results of this additional site assessment are included in succeeding sections of this report. Intrusive site investigation results are presented in Section 4.0. Details of the analytical testing program are provided in Section 4.6, and the results of analytical testing are presented in Section 4.7. A summary of the findings of this phase of the investigation are presented in Section 5.0. Conclusions are presented in Section 6.0 regarding the spatial extent (both lateral and vertical) of hydrocarbon-impacted subsurface soil and groundwater. Section 7.0 is a CAP, which supports (in Section 7.6) a recommendation for a "no further action required" determination, based on those conclusions.

3.0 HYDROGEOLOGIC CONDITIONS

3.1 GEOLOGIC SETTING

The Site is located on the western edge of the Peninsular Range Geologic Province of southern California. The Site is underlain by the middle Eocene-age Delmar Formation (Eisenberg, 1983) consisting of dusky yellowish-green, sandy claystone interbedded with medium-gray, coarse-grained sandstones.

The subsurface geology at the off-site drilling location (MW-10) consists successively of concrete and artificial fill from ground surface to approximately 3 ft bgs, silty sand from approximately 3 ft bgs to approximately 8 ft bgs, underlain by well-graded sand to approximately 15 ft bgs, followed by silt to approximately 30 ft bgs, then by well-graded sand from approximately 30 ft bgs to 35 ft bgs, underlain by silty sand to approximately 40 ft bgs, and silt with sand from approximately 40 ft bgs to 41 feet bgs, the maximum depth of exploration. The borehole sample description log for boring MW-10 is presented in Appendix A.

3.2 HYDROGEOLOGIC SETTING

The Site is located within the Rancho Santa Fe Hydrologic Subarea (905.11) of the Solana Beach Hydrologic Area (905.10) of the San Dieguito Hydrologic Unit (905.00), as outlined in the California Regional Water Quality Control Board Basin Plan (CRWQCB, 1996). Groundwater in the Solana Beach Hydrologic Area is designated as having beneficial uses for municipal, agricultural, and industrial purposes, but is not designated as a "sensitive aquifer". An intermittent shallow creek (La Orilla Creek) is present northwest of the Site and bisects the Rancho Santa Fe Golf Course from east to west. Surface water at the subject site generally drains toward the northwest. The beneficial uses for ground water and surface waters in the vicinity of the Site are presented on Table 3.

Evidence of first ground water during drilling in boring MW-10 on April 13, 2004 was encountered at approximately 33.5 ft bgs. However, reported DTW in MW-10 on May 7, 2004 was 26.95 ft bgs suggesting that ground water in the vicinity of MW-10 is confined. DTW in wells MW-1 thru MW-10 ranged from 10.65 to 26.95 ft bTOC on May 13, 2004. The calculated groundwater gradient on May 13, 2004 monitoring event was oriented toward the northwest at a magnitude of 0.085 ft/ft.

DTW measurements in wells MW-1 thru MW-10 on August 2, 2004 ranged from 11.06 to 26.89 ft bTOC. The calculated groundwater gradient on August 2, 2004 was oriented toward the northwest at a magnitude of 0.095 ft/ft.

DTW measurements in wells MW-1 thru MW-10 on November 4, 2004 ranged from 10.75 to 25.04 ft bTOC. The calculated groundwater gradient on November 4, 2004 was oriented toward the northwest at a magnitude of 0.10 ft/ft.

4.0 SITE ASSESSMENT METHODOLOGY

This section presents a description of the field methods and procedures that were used to conduct intrusive investigations of subsurface soil and groundwater conditions at the Site.

4.1 PRE-FIELD PREPARATION

4.1.1 Health and Safety Plan

A site-specific HASP was prepared by SECOR prior to initiation of field activities. On-site personnel were required to review the HASP prior to commencement of the site assessment and were instructed to conduct field activities in accordance with HASP guidelines.

4.1.2 Drilling Permit

Prior to commencing assessment activities, SECOR submitted a permit application and appropriate fees to the LWQD for the installation of one soil boring and subsequent construction of one (1) ground water monitoring well. The LWQD approved the permit request on April 12, 2004. A copy of the approved drilling permit is provided in Appendix B.

4.1.3 Underground Utility Clearance

Prior to drilling activities, the drilling location was marked, in accordance with applicable regulatory requirements and Underground Service Alert (USA) was notified. USA notified local utility companies of the scheduled subsurface investigation and representatives of the potentially affected utilities marked the location of their underground utilities. Additionally, SECOR met with Subsurface Alert, Inc., a private utility locator, to mark underground utilities.

4.2 DRILLING AND SOIL SAMPLING

On April 13, 2004, a SECOR geologist supervised the drilling and sampling of one soil boring (MW-10; Figure 2) and the subsequent construction of monitoring well MW-10 in the borehole. The boring was drilled by WestHazmat Drilling Corp. (WestHazmat) using a CME 75 drilling rig equipped with 8-in outside diameter continuous-flight, hollow-stem augers (HSAs).

During drilling of the MW-10 boring, soil samples were collected at approximate 5-foot depth intervals from 10 to 40 ft bgs. The samples were collected, prepared, and screened for the presence of organic vapors using an OVA. A SECOR geologist logged (described) samples of soil using the visual/manual method for the Unified Soil Classification System (USCS), as prescribed in the ASTM Standard D 2488-93. Edited boring logs are provided in Appendix A. Downhole drilling and sampling equipment was decontaminated prior to use. Soil cuttings generated during drilling activities were placed in 55-gal drums, properly labeled, and left at the Site pending receipt of the results of laboratory analyses and determination of appropriate waste disposal.

4.3 MONITORING WELL PURGING AND SAMPLING

On May 7, 2004 BlaineTech (BT) developed MW-10 by surging the well for 15-minutes prior to purging the well of approximately 33-gals of ground water. During the development temperature, pH, specific conductivity, and turbidity parameters were monitored and recorded. The well development logs for MW-10 are included as Appendix C.

On May 13, 2004, August 2, 2004 and November 4, 2004 DTW was measured in wells MW-1 thru MW-10 using an electronic water level meter. Following gauging, the wells were purged using a submersible pump and sampled in accordance with LWQD guidelines (provided in the 2004 SAM Manual). Based on LWQD guidelines, wells MW-1 thru MW-5 and MW-7 thru MW-10 were characterized as "fast recharging". Approximately 1.5 borehole volumes of water were removed from each well to allow non-stagnant formation water to enter the filter pack and casing. Three water-quality indicators (i.e., specific conductivity, pH, and temperature) were measured repeatedly during purging to assist in evaluating when a sufficient volume of stagnant formation water had been removed from the well.

Groundwater samples were collected from each well in clean disposable bailers and transferred to analysis-specific 40 milliliter (ml) glass vials containing analysis-specific preservatives. Labels were attached to each sample container prior to placement into a pre-cooled (approximately 4° Centigrade) chest. The samples were transported to a California-certified analytical laboratory (Del Mar Analytical of Colton, California) under Chain of Custody protocol for chemical analysis. DTW and well purging and sampling data were recorded on Monitoring Well Gauging Logs and on Well Purging/Sampling Logs. A copy of these logs is provided in Appendix C.

4.4 WASTE MATERIALS MANAGEMENT

As noted in the preceding sections, soil cuttings were stored at the Site in properly labeled 55-gallon United States Department of Transportation (DOT)-approved steel drums. Soil cuttings were profiled using the soil sample analytical results. The soil cuttings were transported by Phillips Services Company (PSC), a CEMC-approved waste transporter, as non-hazardous materials to TPS Technologies, Inc. (TPS) for treatment and/or disposal. Development and purge water was retained in poly-plastic tanks attached to the well development purge truck and transported to the BT facility as non-hazardous waste, where the purge water was bulked and transported by PSC for disposal to US Filter, a CEMC-approved disposal facility for treatment and/or disposal. A copy of the waste manifests and bills of lading are provided in Appendix D.

4.5 WELLHEAD SURVEY

On April 20, 2004, well MW-10 was surveyed by a licensed California surveyor to the specifications of State Senate Bill AB2886. A copy of the survey report is included as Appendix E.

4.6 CHEMICAL TESTING PROCEDURES

One soil sample (MW-10-S-25'), collected on April 13, 2004, during drilling activities, was analyzed by Del Mar Analytical (Del Mar) for TPHg, BTEX, MTBE, DIPE, TBA, ETBE, and TAME using EPA Method 8260B. Groundwater samples from all of the monitoring wells associated with the Site were collected on May 13, 2004 and analyzed by Del Mar for TPHg, BTEX, MTBE, DIPE, TBA, ETBE, and TAME using EPA Method 8260B.

4.7 ANALYTICAL RESULTS

4.7.1 Soil Analytical Results – Drilling

TPHg, BTEX or MTBE concentrations, above the respective constituent LMDLs were reported in the soil sample collected from MW-10 at 25 ft bgs. Analytical results are summarized in Table 1; and TPHg, benzene and MTBE concentration distributions are illustrated on Figure 5. A copy of the laboratory report and chain-of-custody documentation is included in Appendix F.

4.7.2 Groundwater Sampling Analytical Results

Groundwater samples were collected on May 13, 2004 after the installation and development of MW-10. A second groundwater monitoring event, requested by Mr. Jim Shuck of the SAM, prior to the submittal of this report, was performed on August 2, 2004. A third groundwater monitoring event was performed on November 4, 2004. Laboratory analytical results for the previously mentioned monitoring events as well as historical analytical results are summarized on Table 2. A copy of the laboratory report and chain-of-custody documentation for the May 13, 2004 monitoring event is presented in Appendix F.

May 13, 2004 Sampling Event: Groundwater samples were collected from wells MW-1 thru MW-10. TPHg concentrations, ranging from 540 µg/L (MW-2) to 90,000 µg/L (MW-1), were reported above the laboratory detection limit in five of the ten groundwater samples submitted for analysis. The remaining five groundwater samples did not contain TPHg in concentrations at <500 µg/L to <50,000 µg/L. Benzene was detected in eight of the ten groundwater samples at concentrations ranging from 1.5 µg/L (MW-7) to 8,500 µg/L (MW-1). Toluene was detected in eight of the ten groundwater samples, with concentrations ranging from 37,000 µg/L (MW-1) to 3.2 µg/L (MW-7). Ethylbenzene was also detected in eight of the ten groundwater samples, with concentrations ranging from 0.61 µg/L (MW-7) to 3,200 µg/L (MW-1). Total xylenes were detected in eight of ten groundwater samples, with concentrations ranging from 3.5 µg/L (MW-7) to 20,000 µg/L (MW-1). TBA was detected in four of the ten groundwater samples, at concentrations ranging from 66 µg/L (MW-7) to 1,000 µg/L (MW-6). DIPE, ETBE, TAME, and MTBE concentrations were not detected in any of the ten groundwater samples submitted for laboratory analysis.

Groundwater analytical results for TPHg, benzene, MTBE and TBA are presented on Figure 6 (SECOR, 2004a). TPHg and benzene isoconcentration contour maps are presented as Figures 7 and 8, respectively. A TBA isoconcentration contour map is presented as Figure 9. The groundwater gradient was calculated by SECOR to be oriented toward the northwest at a magnitude of approximately 0.085 ft/ft (Figure 10).

August 2, 2004 Sampling Event: A second set of groundwater samples was collected from the monitoring wells associated with the Site. TPHg was detected in eight of the ten wells sampled, ranging from 140 µg/L (MW-7) to 73,000 µg/L (MW-1). Benzene was detected in eight of the ten wells sampled, at concentrations ranging from 4.2 µg/L (MW-7) to 9,600 µg/L (MW-1). Toluene concentrations were detected in eight of the ten wells sampled, at concentrations ranging from 11 µg/L (MW-7) to 32,000 µg/L (MW-1). Ethylbenzene concentrations were detected in eight of the ten wells sampled, ranging from 1.4 µg/L (MW-7) to 3,600 µg/L (MW-1). Total xylenes were detected in eight of ten wells sampled ranging from 7.6 µg/L (MW-7) to 22,000 µg/L (MW-1). TBA was detected in five of the ten wells sampled, at concentrations ranging from 32 µg/L (MW-2) to 680 µg/L (MW-6). MTBE, ETBE, DIPE, and TAME concentrations were not detected above laboratory detection limits in any of the ten wells that were sampled. Groundwater analytical results for TPHg, benzene, MTBE, and TBA are presented on Figure 11. TPHg and benzene isoconcentration contour maps are presented as Figures 12 and 13, respectively. A TBA isoconcentration contour map is presented as Figure 14.

The pH readings for the impacted groundwater plume ranged from 3.4 standard units in MW-4 (interior of the plume) to 6.0 standard units at MW-10 (exterior of the plume). The iso-unit map of pH measurements (Figure 15) indicates an area of lower pH readings present within the interior of the plume. Specific conductivity measurements ranged from 12,200 microsiemens (µS) to 23,000 µS, approximately equivalent to 7,686 ppm and 14,490 ppm TDS (Groundwater and Wells, 2nd Edition, 1989, page 92-93). Estimated recharge rates for ground water monitoring wells at the Site ranged from 0.1 gpm to 1.5 gpm. The groundwater gradient was oriented toward the northwest at a magnitude of approximately 0.095 ft/ft (Figure 16).

The groundwater analytical results are summarized on Table 1 of the Third Quarter 2004 groundwater monitoring report for the Site. Analytical results and groundwater purging and sampling data sheets are also presented in the Third Quarter 2004 groundwater monitoring report for the Site, dated October 25, 2004, which was submitted to the SAM under separate cover (SECOR, 2004b).

November 4, 2004 Sampling Event: A third set of groundwater samples was collected from the monitoring wells associated with the Site. TPHg was detected in one of the ten wells at 950 µg/L (MW-2). Benzene was detected in eight of the ten wells sampled, at concentrations ranging from 3.1 µg/L (MW-7) to 8,500 µg/L (MW-1). Toluene was detected in eight of the ten wells sampled, at concentrations ranging from 8.0 µg/L (MW-7) to 38,000 µg/L (MW-1). Ethylbenzene was detected in eight of the ten wells sampled, at concentrations ranging from 1.0 µg/L (MW-7) to 3,000 µg/L (MW-1). Total xylenes were detected in eight of the ten wells sampled, at concentrations ranging from 5.6 µg/L (MW-7) to 18,000 µg/L (MW-1). TBA was detected in three of the ten wells sampled, at concentrations ranging from 57 µg/L (MW-7) to 970 µg/L (MW-6). MTBE, ETBE, DIPE, and TAME concentrations were not detected above laboratory detection limits in any of the ten wells that were sampled. Groundwater analytical results for TPHg, benzene, MTBE, and TBA are presented on Figure 17. TPHg and benzene isoconcentration maps are presented

as Figures 18 and 19, respectively. A TBA isoconcentration contour map is presented as Figure 20.

The pH readings for the impacted groundwater plume ranged from pH readings ranged from 3.4 standard units in MW-4 (interior of the plume) to 6.0 standard units at MW-10 (exterior of the plume). Figure 21 depicts a pH iso-unit map for the November 4, 2004 sampling event. Specific conductivity measurements ranged from 7,270 μ S (MW-5) to 25,800 μ S (MW-4), approximately equivalent to 454 ppm and 16,254 ppm TDS (Groundwater and Wells, 2nd Edition, 1989, page 92-93). Estimated recharge rates for ground water monitoring wells at the Site ranged from 0.4 gpm to 2.6 gpm. The ground water gradient was oriented toward the northwest at a magnitude of approximately 0.10 ft/ft (Figure 22).

The ground water analytical results are summarized on Table 2. Analytical results and groundwater purging and sampling data sheets are also presented in the Fourth Quarter 2004 monitoring report for the Site, dated December 14, 2004, which was submitted to the SAM under separate cover (SECOR, 2004c).

4.7.3 Dissolved Plume Stability Analysis

To assess the stability of the dissolved phase ground water plume, SECOR constructed graphs relating detectable dissolved phase concentrations of TPHg, benzene, and TBA in ground water with time (Appendix G). For purposes of this discussion, the plume is separated into three areas: source wells (MW-1 thru MW-5), cross gradient wells (MW-7 and MW-8), and downgradient wells (MW-6 and MW-9). Well MW-10 is excluded since only three monitoring events have been performed. Based on review of the graphs, it appears that (in the source area of the plume) a general trend is discernable of declining to stable concentrations of TPHg, benzene, and TBA. The cross gradient area of the plume generally indicates declining benzene and TBA concentrations. The downgradient area of the plume indicates increasing benzene and TBA concentrations and stable to increasing TPHg.

An evaluation of dissolved phase concentrations was also performed by SECOR to evaluate the decline in downgradient concentrations of TPHg, benzene and TBA with distance from the source area. TPHg concentrations declined approximately 98.4% over a distance of 152 ft between MW-1 and MW-6. Benzene concentrations declined approximately 97.9% over a distance of 168 ft between MW-1 and MW-9. The percentage decrease in TBA concentrations could not be calculated due to a lack of concentrations exceeding elevated detection limits in the source area of the plume. The most downgradient well, MW-10, is located approximately 248 ft downgradient and 292 ft downgradient and slightly cross gradient from wells MW-6 and MW-9, respectively.

5.0 SITE ASSESSMENT FINDINGS

Based on the results of historical and the current site assessment activities described in Section 3.0 through 6.0, SECOR presents the following findings on site conditions and the impact of hydrocarbon-impacted soil and ground water on sensitive receptors in the site vicinity.

5.1 LOCAL HYDROSTRATIGRAPHIC CONDITIONS

The subsurface stratigraphy at the off-site drilling location (MW-10) consists primarily of concrete and artificial fill from ground surface to approximately 3 ft bgs, silty sand from approximately 3 ft bgs to approximately 8 ft bgs, underlain in turn by well graded sand to approximately 15 ft bgs, by silt to approximately 30 ft bgs, by well graded sand from approximately 30 ft bgs to 35 ft bgs, by silty sand to approximately 40 ft bgs, and by silt with sand from approximately 40 to 41 ft bgs, the maximum depth of exploration. Interpreted lithologic and hydrostratigraphic relationships in subsurface soils across the site are presented on cross sections A – A' and B – B', Figures 23 and 24, respectively. In the absence of a descriptive boring log for monitoring well MW-1, geologic descriptions were interpreted from historic geologic cross sections, included in Appendix A.

On April 14, 2004 ground water was encountered during the drilling of MW-10, between approximately 33 and 34 ft bgs. Reported DTW on May 13, 2004 in MW-10 was 26.95 ft bTOC. The reported DTW for all wells associated with the Site on May 13, 2004 from 10.65 to 26.95 feet bTOC. The difference in the depth to first water and depth to static water (May 13, 2004) in MW-10, approximately 6.55 ft, suggests that ground water locally is confined. SECOR calculated the groundwater flow direction to be toward the northwest at a magnitude of 0.085 ft/ft on May 13, 2004 (Figure 10), 0.095 ft/ft on August 2, 2004 (Figure 16), and 0.10 ft/ft on November 4, 2004 (Figure 22). These groundwater gradient maps were prepared using the surveyed well locations, surveyed wellhead elevations from Table 4, and the May 13, August 2, and November 4, 2004 DTW measurements. Figures 6, 11 and 17 present groundwater concentrations of TPHg, benzene, MTBE, and TBA for the three groundwater sampling events (May 13, 2004; August 2, 2004; and November 4, 2004, respectively).

5.2 SOIL ASSESSMENT

Detectable concentrations of TPHg, BTEX, MTBE, ETBE, TAME, DIPE, or TBA were not found in the 25-ft sample from soil boring MW-10.

Soil sample analytical data from previous assessments indicate that soil containing TPHg concentrations above LMDLs, is present in the vicinity of the former UST excavation and former fuel dispenser islands. Specifically, the impact to soil appears to be present in the vicinity of the suspected release sources and has migrated downward to the soil/water interface ("capillary fringe") and remained there. TPHg concentrations exceeding LMDLs (including a maximum of 4,000 mg/kg in MW-1 at 15 ft bgs) were reported in soil samples collected from soil borings B-2, B-3, B-8 and MW-1 at depths ranging from approximately 10 to 20 ft bgs. This suggests that there is an approximately 10-ft thick hydrocarbon-impacted soil zone in the suspected release area. Outside the suspected release area the

impacted soil zone decreases from 10 ft to approximately 5 ft in thickness from MW-1 to MW-3, a distance of approximately 12 ft. Soil impact in the vadose zone appears to be confined to the suspected release area. TPHg concentrations were less than the detection limits in 60 of 82 soil samples collected and analyzed from the areas investigated during this and previous phases of site investigation work.

Based on the distribution of soil samples indicating TPHg-impacted soil, the vertical extent of TPHg in soil conservatively was estimated to occur from approximately 10 to 20 ft bgs (10-ft thick zone of impact) in the vicinity of the former UST excavation and the fuel dispensers. The rectangular-shaped zone of soil impact has dimensions of approximately 100 ft (length) by 28 ft (width) by 10 ft (thickness).

Based on the area of impact (rectangle), mean soil sample TPHg concentration (764.67 mg/Kg), and a soil plume thickness of 10 ft, SECOR estimates the volume of impacted soil with TPHg concentrations greater than laboratory detection limits, is approximately 726 in-place cubic yards (yd³) (Table 5). Refer to Figures 5, 23, and 24 for graphic depictions of the estimated spatial extent of hydrocarbon-impacted soils remaining in place beneath the Site.

5.3 GROUNDWATER ASSESSMENT

Ground water in the shallow aquifer beneath the Site has been impacted by gasoline-range hydrocarbon constituents, including TPHg, BTEX, and TBA. The presence of TBA in the ground water, despite the general lack of MTBE in the gasoline dispensed prior to the decommissioning of the station and removal of the USTs, is discussed in Section 2.2.2. TBA concentrations have historically been detected in eight of the ten wells, including the most up gradient well MW-2. Results from the August 2, 2004 monitoring event show a minimum TBA concentration of 36 µg/L (MW-2) and a maximum TBA concentration of 680 µg/L (MW-6). Results from the November 4, 2004 monitoring event show a minimum TBA concentration of 57 µg/L (MW-7) and a maximum TBA concentration of 970 µg/L (MW-6). The concentrations of TBA in MW-6 and MW-9 indicate a general increase in TBA concentrations, but SECOR notes that the water table has recently risen to historical high levels (Table 4). The likely reason for the increasing TBA (and BTEX) concentrations in samples from wells MW-6 and MW-7 is smear zone leaching, instead of continued migration of the impacted groundwater plume. Also, the TBA concentrations in samples from the perimeter wells continue to indicate a declining trend in concentrations despite the rising water table. This suggests that TBA in the plume is undergoing dispersion, diffusion, and/or possibly biotransformation. The horizontal limits of the dissolved-phase hydrocarbon plume are defined by wells MW-2 (upgradient), MW-7 (cross gradient), MW-8 (cross gradient) and MW-10 (downgradient). Hydrocarbon-impacted ground water appears to be generally limited to the vicinity of wells MW-1, MW-3, MW-4 and MW-5.

Groundwater samples collected from the four site perimeter wells (MW-2, MW-7, MW-8, and MW-10) contain either low or non-detectable concentrations of dissolved gasoline petroleum hydrocarbons. Therefore, based on groundwater analytical data collected to date, the dissolved-phase hydrocarbon plume appears to be stable and to be limited in horizontal extent to the vicinity of wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, and MW-9.

Detectable dissolved-phase MTBE concentrations, verified using EPA Method 8260, have not been reported (August 2, 2004), at detection limits ranging from <1.0 µg/L to <400 µg/L in the groundwater samples collected from all 10 ground water monitoring wells. Similar results were found for the November 4, 2004 groundwater sampling event, with detection limits ranging from <1.0 µg/L to <500 µg/L. Although MTBE has not been detected in groundwater samples from the Site since the case was opened, the detection limits for the analyses of groundwater samples collected from the area of the Site with the most elevated TPHg and benzene concentrations are sufficiently high to have masked the remaining untransformed MTBE in the ground water. However, based on these analytical data, MTBE is not considered to be a constituent of concern at the site.

Since the dissolved-phase gasoline plume (i.e., benzene) is associated directly with the residual hydrocarbon-impacted soil within the capillary fringe at the Site, it is not possible to precisely predict the number of years that it will take for the dissolved-phase benzene plume to completely degrade naturally (by aerobic biodegradation). Based on the generally decreasing dissolved-phase benzene concentration trend (see Appendix G), as well as the age (old) and general stability of the plume, the dissolved-phase benzene concentrations would be expected to completely degrade in several decades.

As discussed in Section 2.2.7, the SFID currently does not plan to utilize the ground water beneath the Site as a potable water supply now or in the foreseeable future (extending well beyond the estimated timeframe for the dissolved-phase hydrocarbon constituents to completely degrade via un-enhanced aerobic biodegradation). Therefore, SECOR considers it reasonable to assume that the SFID will not consider the impacted groundwater in the Site vicinity to be a viable potable water source (elevated sulfate, salinity, TDS, and TSS) within the above-mentioned degradation timeframe.

5.4 ASSESSMENT OF ADVERSE IMPACTS

SECOR has evaluated the potential adverse impacts that may result from the residual hydrocarbons in the vadose zone, capillary fringe, and saturated zone beneath and/or downgradient of the Site. Refer to Section 2.2.4 for a discussion of the soil vapor plume, Section 5.2 for the residual hydrocarbon-impacted soils, and Section 5.3 for the dissolved-phase gasoline plume. SECOR notes that residual hydrocarbon-impacted soil was left beneath the base of the UST pit that was excavated during the 1979 UST removal activities; the impacted soil zone is depicted on Figures 5, 23, and 24. Five potential adverse impacts were evaluated: water resources, human health, fire and explosion, nuisance, and ecological receptors.

5.4.1 Water Resources

Refer to Sections 2.2.2 and 2.2.7 for an evaluation of water resources in the Site vicinity. SECOR has identified actual or potential beneficial uses of groundwater resources in the Site vicinity to be municipal, agricultural, and industrial (Table 3). However, the SFID does not currently use the aquifer for groundwater production, and there are no immediate plans to do so based on high levels of salinity and TDS.

5.4.2 Human Health

SECOR performed a HHRA prior to the preparation of the CAP. The only realistic pathways of exposure to human receptors were inhalation of benzene vapors (from shallow-seated hydrocarbon-impacted soil at the site) and direct contact with the buried hydrocarbon-impacted soil by construction workers during future site reconstruction activities. It is unlikely that underground utility maintenance activities would expose construction workers to direct contact with hydrocarbon-impacted soils, because most of these subsurface utilities run along El Tordo and La Granada at burial depths up to 7 feet bgs (refer to Section 2.2.5). The utility trenches are too shallow to provide a conduit for migration of vapor-phase gasoline-range hydrocarbons from the impacted groundwater plume, which is 8 to 12 feet deeper. The discussion of the human health risks that are posed by direct contact are addressed below in Section 5.4.4 as a "nuisance".

5.4.3 Fire and Explosion

Refer to Section 2.2.4 for a discussion of absence of a soil vapor plume emanating from the residual hydrocarbon-impacted soils at the Site. Eleven soil vapor samples were collected at depths of 1 to 5 ft bgs at locations around the perimeter of the Site building; however, none of the vapor samples contained detectable concentrations of TPHg, BTEX, MTBE, DIPE, ETBE, TAME, and TBA. These identified soil vapor concentrations are too low to be considered either a fire or an explosion hazard to either on-site workers or off-site residents.

5.4.4 Nuisance

The term "nuisance" for the purposes of this discussion is equated with future waste management issues associated with residual impacts at the Site. SECOR believes that it is reasonable to assume that any future due diligence assessment of the site will reveal its 20-year history as a service station. SECOR believes that the health of construction workers exposed briefly to hydrocarbon-impacted soil during any future on-site excavation should not be adversely impacted. All excavated soil at the Site should be properly characterized and managed prior to off-site export.

5.4.5 Ecological Receptors

SECOR has identified no known ecological receptors which can be adversely impacted by historic product releases from the site, including the presence of wetlands or other sensitive environmental or ecological receptors.

5.4.6 Residual Impacts Conclusions

- There are no actual or potential adverse impacts to human health from residual hydrocarbon-impacted soil and impacted groundwater, either on site or off site.
- There are actual or potential adverse impacts to the beneficial uses of groundwater resources and surface water resources, either on site or off site; however, SFID does

not currently use the aquifer for groundwater production, and there are no immediate plans to do so based on high levels of salinity and TDS.

- The residual impacts at the Site do not pose a fire or explosion hazard.
- Surficial soils across the site are suspect (e.g., potentially hydrocarbon-impacted) due to the site's 20-year history of continuous use as a service station. It would be prudent for any future construction contractor to properly characterize and manage any excavated soil generated during future site reconstruction.
- There are no sensitive environmental or ecological receptors located within the Site vicinity.

6.0 SITE ASSESSMENT REPORT CONCLUSIONS

The following bulleted items describe the pertinent conclusions made for consideration of closure of the case for the subject site.

- SECOR concludes that there are no known, ongoing UST-related contaminant release sources associated with the Site. Gasoline products have not been dispensed at the Site since 1979, and the known gasoline UST systems were removed in 1979.
- The gasoline release to the soil at the Site has been adequately characterized. SECOR estimates that the volume of TPHg impacted soil at the Site is approximately 726 in-place yd³.
- Hydrocarbon impact to capillary fringe soils, outside the immediate area of the former USTs and dispenser islands, via groundwater transport, is not indicated.
- The most likely source of TBA is releases from the former gasoline products distribution facilities at the former service station. A secondary source of TBA, upgradient from the Site, is not supported by groundwater monitoring data and the results of environmental databases performed by SECOR.
- The presence of MTBE in the gasoline dispensed at the Site, although unlikely because of the timeframe when operations (gasoline dispensing) ceased at the Site, cannot be completely eliminated because the length of time from the latest date of a possible release could permit a complete vapor-phase migration of MTBE in the soil to the ground water, a possible complete transformation of MTBE to TBA within that timeframe, and because of the elevated detection limits for MTBE in the center of the plume could be masking the presence of residual MTBE in the plume.
- Concentrations of dissolved-phase hydrocarbons in the vicinity of the former USTs and dispenser islands indicate a decreasing trend that strongly suggests that the source of hydrocarbon impact to ground water from the soil is decreasing (source depletion).
- The groundwater sample analytical results for the three most recent sampling events (May 13, 2004; August 2, 2004; and November 4, 2004) indicate that the lateral extent of residual hydrocarbon groundwater impact has been adequately defined. The recent increases in BTEX and TBA concentrations in downgradient wells MW-6 and MW-9 are attributed to flushing of the smear zone by historically high water levels. SECOR concludes that the dissolved-phase gasoline plume is generally stable and that the dissolved-phase benzene concentrations are declining and likely will continue to completely degrade with time.
- It is not reasonable that the groundwater resources at the Site would be utilized in a timeframe before the hydrocarbon constituents in the ground water have degraded naturally.

- Recharge rates (calculated from monitoring field data) range 0.01 to 2.6 gpm suggest that the ground water in the impacted aquifer at the Site would not be an economic source of potable water.
- Groundwater quality in the area of the Site is affected by elevated TDS, TSS, and reportedly by elevated chloride and sulfate ion concentrations suggesting that the ground water is not a viable source of potable water. The groundwater quality (salinity TDS) reported (anecdotal) for the Rancho Santa Fe Golf Club exploratory borings and TDS concentrations at the Site appear to be in general agreement.
- Based on previous risk assessments, there is no threat to human health on- or off-site.
- An evaluation of Site data indicates that there is no threat to the beneficial uses of surface water from the unauthorized release.
- Based on research conducted by SECOR and previous consultants, there are no plans, present or historical by potable water supply entities to use the ground water in the impacted aquifer in the future due to high levels of TDS, TSS, and salinity.
- The timeframe that may be required to allow the dissolved-phase gasoline plume, and particularly its dissolved components, to degrade naturally is uncertain. However, SECOR concludes that complete degradation of the hydrocarbon constituents can be achieved by un-enhanced natural biodegradation in several decades. It is unlikely that the high TDS- and TSS-impacted groundwater would be utilized by the SFID as a potable water source before the benzene plume degradation is completed.

7.0 CORRECTIVE ACTION PLAN

This CAP has been prepared in accordance with the California Code of Regulations, Title 23, Division 3, Chapter 16, Article 11. As specified in Article 11, there are three elements that should be included in a CAP. These are: 1) an assessment of the impacts of an unauthorized release from a petroleum UST system to the subsurface; 2) a feasibility study to evaluate alternatives for remediating or mitigating the actual or potential adverse impacts of the unauthorized release; and 3) the establishment of applicable cleanup levels to achieve (for waters having actual or potential beneficial uses) numerical water quality objectives (WQOs). SECOR believes that the preceding six sections of this document (which together comprise the SAR) satisfies the first CAP element. The focus of this section will be the other two CAP elements. Because the impacted aquifer has designated beneficial uses, two remedial alternatives that are capable of achieving the WQO will be evaluated.

This CAP evaluates two viable clean-up strategies to mitigate hydrocarbon-impacted soil and groundwater at the subject Site. The proposed strategies, which are discussed in Sections 7.3 and 7.4 below, are as follows: 1) dual-phase, high vacuum extraction events lasting for 5-days, quarterly for two years; and 2) remediation by natural attenuation, or RNA, due to demonstrated stability of the dissolved-phase gasoline plume. One of these two strategies should be capable of achieving the project objectives.

7.1 ESTABLISHMENT OF APPLICABLE CLEANUP LEVELS

Refer to Table 3 for a discussion of the actual or potential beneficial uses of the impacted aquifer, and to Section 2.2.7 for a discussion of the current and foreseeable future use of the aquifer as a source of water for municipal or agricultural water supply. Despite the facts that the aquifer is not currently being used, and that it is unreasonable to expect that it will be used in the foreseeable future, SECOR understands that the water quality cleanup goals are to be based on the designated actual or potential beneficial uses identified by San Diego RWQCB in its *Water Quality Control Plan, San Diego Basin (9)*, dated 1996. The applicable WQO for dissolved benzene for the impacted aquifer is the State MCL, which is 1.0 µg/L benzene.

7.2 REMEDIAL ALTERNATIVES SCREENING

SECOR has performed a remedial alternatives technology screening to eliminate remedial technologies that were unfeasible or unsuitable for use in removing hydrocarbon-impacted soil in the capillary fringe at the Site (Table 6). Dual-phase, high vacuum extraction events was retained for further consideration because it addresses the removal of hydrocarbon-impacted ground water from the subsurface. RNA was also retained for further consideration because it can achieve the WQOs with minimal disruption to current site occupants' commercial enterprises.

The two retained mitigation strategies rely on the lack of any impact to groundwater resources that reasonably can be expected to be used as potable water sources, the presence of an old and stable plume, poor groundwater quality in the area of the Site (high

TDS and low pH), limited water production capability of the affected aquifer, and the lack of any significant risk to human health posed by the release.

7.3 HIGH VACUUM DUAL-PHASE EXTRACTION

Performing multiple high-vacuum dual-phase extraction events, at a frequency of one (1) five-day event, once a quarter for a duration of no more than two years was explored. Based on recent groundwater sample analytical data, impacted groundwater exists beneath the Site. This technology would address removal of the impacted ground water, and also the removal of any soil vapors that may reside in the capillary fringe on-site. The removal of impacted ground water and soil vapors would address and reduce the concentrations beneath the Site, thereby reducing the long-term environmental risk liability of the responsible party (Chevron). However, the amount of removal cannot be accurately calculated, and the benefit of the removal of the hydrocarbons would be minimal. Due to the relatively shallow ground water, the effectiveness of removing soil vapor from the impacted zone would be minimal, and the impact to the local business would be great. Based on these factors, combined with the estimated cost, this remedial technology was not recommended for selection as the preferred remedial alternative.

Remediation to the target clean-up level (i.e., achievement of the WQO for benzene, 1.0 µg/L, in Site wells) would cost approximately \$230,000 over the 2-year duration (Appendix H).

7.4 REMEDIATION BY NATURAL ATTENUATION AND NO FURTHER ACTION

This strategy would involve remediation by un-enhanced natural attenuation (RNA). SECOR contends that extensive soil/groundwater removal and/or remediation is impracticable and unnecessary, if the purpose is to avert human health risk or adverse impacts to the environment. The results of human health risk assessments by Geocon in 1997 and by SECOR in 2003 (reported in Section 2.2.4 of this report) reveal that the aged gasoline plume poses no significant excess cancer risk to the workers of the on- or off-site buildings. The benzene fraction largely has volatilized. Inhalation of benzene vapors from the hydrocarbon-groundwater plume is an incomplete pathway of exposure.

Aerobic biodegradation of dissolved petroleum hydrocarbon constituents is a viable remedial strategy for the dissolved hydrocarbon-impacted groundwater plume. The dissolved hydrocarbon plume in the site vicinity is stable, and soil/groundwater removal and/or remediation is unnecessary to achieve the target groundwater clean-up goal (i.e., achievement of the WQO for benzene, 1.0 µg/L) within the several decades that RNA will need. During this period, it is unlikely that the impacted aquifer will be used by the SFID as a potable water source. Long-term environmental risk liability to the responsible party would remain until the WQO was achieved. It appears to SECOR that a "No Further Action Required" determination for the site could be made by the SAM. There would be no significant costs associated with this strategy.

For costing purposes, it is assumed that RNA would not need to be monitored to prove that attenuation of the dissolved gasoline constituents is occurring. Consequently, the only costs that would be incurred would be for proper abandonment of the ten ground water monitoring wells. The estimated cost associated with monitoring well abandonment is

\$50,000 (Appendix H), which involves the abandonment of approximately 290 linear feet of well casing.

7.5 RECOMMENDED MITIGATION APPROACH

Based on review of the site assessment and groundwater monitoring data collected to date, the Site appears to meet the eight criteria for administrative closure as a "Low Risk Groundwater Case", as outlined by the San Diego RWQCB's *Interim Guidance Document*, dated April 1, 1996. Preceding sections of this CAP have provided an adequate discussion of the criteria, which are listed below.

1. *Groundwater has been impacted, the leak has been stopped and on-going sources, including free product (LPH), have been removed or remediated to the extent practicable.*
2. *The site has been adequately characterized.*
3. *The site is located in a Basin without designated municipal and domestic beneficial uses.*
4. *The site is located outside of a sensitive aquifer boundary.*
5. *The dissolved hydrocarbon plume is not migrating.*
6. *No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.*
7. *The site appears to present no significant risk to human health.*
8. *The site appears to present no significant risk to the environment.*

SECOR notes that the Item #3 criterion can be met if it is not reasonable that the impacted aquifer is not used for potable water supply during the several decades that it will take for the dissolved benzene plume to aerobically biodegrade. Refer to Sections 2.2.7, 2.2.8, and 2.2.9 for substantiating proof that these claims are valid.

SECOR evaluated two viable remediation alternatives for remediating the hydrocarbon-impacted soil and ground water at the Site (refer to Section 7.3 and Section 7.4) and identified RNA to be the more cost-effective of the approaches. SECOR believes that RNA can realistically be expected to achieve the WQO for dissolved-phase benzene if sufficient time is allowed to elapse while the groundwater plume undergoes un-enhanced aerobic biodegradation. Refer to Section 5.3 for a discussion of the basis for SECOR's conclusion that the plume degradation timeframe of several decades will elapse before the aquifer can be reasonably expected to be used as an actual groundwater source for municipal or agricultural water supply.

7.6 CONCLUSIONS AND RECOMMENDATIONS

Based on SECOR's review of the two retained site mitigation strategies, SECOR concludes that RNA is the preferred mitigation approach for this site. SECOR does recognize the benefits of implementing more aggressive remedial technologies to reduce the hydrocarbon impact beneath the Site, but since the Site is not located within a sensitive aquifer basin, SECOR believes that there is no incremental benefit to human health or water resources from more aggressive remediation. SECOR notes that the continuing presence of residual hydrocarbons and dissolved-phase hydrocarbons in the Site's subsurface presents no credible threat to human health, water resources, or the environment. SECOR recognizes that it would take several decades for the stable dissolved-phase hydrocarbon plume to be fully bioremediated. However, SECOR believes that it is unlikely that there will be any future threats to the human health, water resources, or the environment during this extended RNA period.

SECOR therefore recommends that the dissolved-phase motor fuel hydrocarbon plume be allowed to be reduced by RNA.

Proposed Implementation Schedule

To implement the RNA process and to secure expeditious administrative closure of the subject site (Unauthorized Release # H36819-002) case file, SECOR recommends that the following sequence of events be approved for implementation by the SAM:

- 1) The SAM should review and approve the CAP, and then the LWQD case officer should issue a conditional letter of concurrence for the CAP and for its recommended mitigation approach (e.g., RNA and Well Abandonment).
- 2) The SAM should issue a written authorization to SECOR to implement the public notice process (for concerned residents and commercial businesses) and its 30-day comment period.
- 3) Upon successful completion of the comment period, the SAM case officer should issue a final concurrence letter for the CAP and its selected remedial alternative (e.g., RNA and Well Abandonment).
- 4) SECOR should secure all necessary well abandonment permits, encroachment permits, and traffic control plan permits to enable it to decommission all 10 of the groundwater monitoring wells.
- 5) SECOR should then proceed to properly abandon the ten groundwater monitoring wells in accordance with the approved LWQD well abandonment permit specifications.

8.0 LIMITATIONS

The findings and conclusions contained in this report have been prepared for specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental scientific profession currently practicing under similar conditions in the area at the time this investigation was performed. No warranty, either expressed or implied, is made. This report is for the exclusive use of ChevronTexaco and their representatives.

A potential always remains for the presence of the unknown, unidentified, or unforeseen subsurface contamination. Further evidence against such potential site contamination would require additional subsurface exploration and testing.

9.0 REFERENCES

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TABLES

TABLE 1
SUMMARY OF SOIL SAMPLE ANALYTICAL RESULTS - DRILLING
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California
All concentrations reported in milligrams per kilogram (mg/kg).

Sample ID	Sample Depth (bgs)	Date Sampled	TPHg	B	T	E	X	TAME	TBA	DIPE	ETBE	MTBE	TPHd
Previous Assessment Activities													
B-1	5	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-1	10	02/05/97	<1	0.045	0.110	0.0077	0.081	--	--	--	--	--	<10
B-1	15	02/05/97	<1	0.09	0.200	0.011	0.120	--	--	--	--	--	<10
B-1	20	02/05/97	<1	0.037	0.099	0.0077	0.045	--	--	--	--	--	<10
B-2	5	02/05/97	<1	0.006	0.060	0.008	0.060	--	--	--	--	--	<10
B-2	10	02/05/97	2,300	34.60	240.30	66.20	133.00	--	--	--	--	--	128
B-2	15	02/05/97	1,600	22.10	140.30	44.40	91.70	--	--	--	--	--	424
B-2	20	02/05/97	550	8.40	44.20	12.70	26.90	--	--	--	--	--	81
B-3	5	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-3	10	02/05/97	1,100	2.65	5.40	31.40	105.00	--	--	--	--	--	358
B-3	15	02/05/97	1,100	5.80	106.70	25.30	166.00	--	--	--	--	--	184
B-3	20	02/05/97	2,200	41.30	210.70	55.80	113.00	--	--	--	--	--	403
B-4	5	02/05/97	<1	<0.005	0.026	0.009	0.062	--	--	--	--	--	<10
B-4	10	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-4	15	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-4	20	02/05/97	1.4	0.051	0.560	0.035	0.240	--	--	--	--	--	<10
B-5	5	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-5	10	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-5	15	02/05/97	<1	0.026	0.110	0.0085	0.088	--	--	--	--	--	<10
B-5	20	02/05/97	<1	0.069	0.320	0.033	0.210	--	--	--	--	--	<10
B-6	2	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-6	5	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-6	8	02/05/97	<1	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	<10
B-7	5	04/01/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-7	10	04/01/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-7	15	04/01/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-7	20	04/01/97	2.1	0.090	0.57	<0.05	0.24	--	--	--	--	<0.10	--
B-8	5	04/02/97	5.4	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-8	10	04/02/97	620	<0.2	3.0	5.7	18	--	--	--	--	<4.0	--
B-8	15	04/02/97	1,900	7.3	100	17	140	--	--	--	--	<4.0	--
B-8	20	04/02/97	4.3	0.11	0.69	0.079	0.56	--	--	--	--	<0.10	--
B-8	25	04/02/97	1.6	0.12	0.25	<0.05	0.15	--	--	--	--	<0.10	--
B-8	30	04/02/97	44	0.090	2.1	0.75	5.0	--	--	--	--	<0.10	--
B-8	35	04/02/97	<1	<0.05	0.061	<0.05	<0.15	--	--	--	--	<0.10	--
B-9	5	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-9	10	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-9	15	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
B-9	20	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--

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Sample ID	Sample Depth (bgs)	Date Sampled	TPHg	B	T	E	X	TAME	TBA	DIPE	ETBE	MTBE	TPHd
MW-1	5	04/01/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	10	04/01/97	2.9	<0.05	0.15	0.074	0.34	--	--	--	--	<0.10	--
MW-1	15	04/01/97	4,000	15	210	41	270	--	--	--	--	<200	--
MW-1	20	04/01/97	1,300	<10	89	20	140	--	--	--	--	<200	--
MW-1	25	04/01/97	<1	0.065	0.18	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	30	04/01/97	<1	<0.05	0.10	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	35	04/01/97	1.2	0.081	0.22	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	40	04/01/97	<1	0.056	0.15	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	45	04/01/97	1.1	<0.05	0.15	<0.05	<0.15	--	--	--	--	<0.10	--
MW-1	50	04/01/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	5	04/03/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	10	04/03/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	15	04/03/97	<1	<0.05	0.12	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	20	04/03/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	25	04/03/97	<1	<0.05	0.13	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	30	04/03/97	<1	<0.05	0.051	<0.05	<0.15	--	--	--	--	<0.10	--
MW-2	35	04/03/97	<1	0.05	0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-3	5	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-3	10	04/02/97	<1	<0.05	0.11	<0.05	<0.15	--	--	--	--	<0.10	--
MW-3	15	04/02/97	80	0.31	3.1	1.0	6.8	--	--	--	--	<4.0	--
MW-3	20	04/02/97	7.7	0.27	1.1	0.15	0.98	--	--	--	--	<0.10	--
MW-3	25	04/02/97	1.0	0.094	0.19	<0.05	<0.15	--	--	--	--	<0.10	--
MW-3	30	04/02/97	<1	<0.05	<0.05	<0.05	<0.15	--	--	--	--	<0.10	--
MW-4	10	06/17/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-4	15	06/17/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-4	20	06/17/98	<10	0.060	0.22	<0.050	<0.15	--	--	--	--	<0.035	--
MW-4	25	06/17/98	<10	<0.050	0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-5	10	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-5	15.5	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-5	20	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-5	25	06/16/98	<10	0.38	0.97	<0.050	0.34	--	--	--	--	<0.035	--

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Sample ID	Sample Depth (bgs)	Date Sampled	TPHg	B	T	E	X	TAME	TBA	DIPE	ETBE	MTBE	TPHd
MW-6	15	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-6	20	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-6	25	06/16/98	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.035	--
MW-7	15	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	<0.0050	<0.100	<0.0050	<0.0050	0.041/<0.0050	--
MW-7	25	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-7	28	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-8	15	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	<0.0050	<0.100	<0.0050	<0.0050	0.059/<0.0050	--
MW-8	25	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-8	28	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-9	15	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-9	25	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
MW-9	28	10/24/01	<10	<0.050	<0.050	<0.050	<0.15	--	--	--	--	<0.010	--
Current Assessment Activities--4/13/04													
MW-10	25	04/13/04	<0.100	<0.050	<0.050	<0.050	<0.150	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	--

Notes:

- bgs = Below ground surface
- TPHg = Total petroleum hydrocarbons as gasoline
- B = Benzene
- T = Toluene
- E = Ethylbenzene
- X = Total xylenes
- TAME = t-amyl methyl ether
- TBA = t-butyl alcohol
- DIPE = Diisopropyl ether
- ETBE = Ethyl-t-butyl ether
- MTBE = Methyl-t-butyl ether
- TPHd = Total petroleum hydrocarbons as diesel
- = Not analyzed
- <# = Below method reporting limit

Table 2
Historic Groundwater Levels and Chemical Analysis Results
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation (feet)*	Corrected Groundwater Elevation (Feet)**	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl-benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	DIPE [3] µg/L (ppb)	ETBE [3] µg/L (ppb)	TAME [3] µg/L (ppb)	TBA [3] µg/L (ppb)
MW-1 100.25	4/1/97	16.60	--	217.37	--	130000	18000	47600	3710	24300	ND	--	--	--	--	--
	7/9/98	15.85	84.40	218.12	--	150000	20000	52000	4200	27000	ND	--	--	--	--	--
	3/29/99	15.75	84.50	218.22	--	140000	20000	47000	2800	20000	<10000	--	--	--	--	--
	5/24/99	15.79	84.46	218.18	--	150000	19000	38000	2300	15000	<10000	--	--	--	--	--
	8/23/99	15.80	84.45	218.17	--	140000	19000	42000	3000	18000	3100	<500	--	--	--	--
	10/22/99	15.89	84.36	218.08	--	310000	18000	48000	5400	35000	<10000	--	--	--	--	--
	2/7/00	15.80	84.45	218.17	Sheen	--	--	--	--	--	--	--	--	--	--	--
	4/21/00	15.28	84.97	218.69	Sheen	--	--	--	--	--	--	--	--	--	--	--
	8/8/00	15.14	85.11	218.83	Sheen	--	--	--	--	--	--	--	--	--	--	--
	10/26/00	15.05	85.20	218.92	Sheen	--	--	--	--	--	--	--	--	--	--	--
	1/22/01	15.02	85.23	218.95	Sheen	--	--	--	--	--	--	--	--	--	--	--
	5/9/01	13.69	86.56	220.28	Sheen	--	--	--	--	--	--	--	--	--	--	--
	9/21/01	13.70	86.55	220.27	Sheen	--	--	--	--	--	--	--	--	--	--	--
	11/27/01	13.60	86.65	220.37	Sheen	--	--	--	--	--	--	--	--	--	--	--
	1/15/02	13.46	86.79	220.51	Sheen	--	--	--	--	--	--	--	--	--	--	--
233.97	5/30/02	13.30	220.67	220.67	--	130000	14000	32000	2900	18000	--	<10	<50	<50	<50	810
	8/29/02	12.82	221.15	221.15	--	150000	18000	45000	3100	20000	--	<200	<400	<400	<400	<5000
	11/21/02	13.17	220.80	220.80	--	140000	18000	3100	47000	20000	--	<400	<2000	<2000	<2000	<10000
	1/21/03	13.32	220.65	220.65	--	150000	16000	44000	3300	21000	--	<1000	<2000	<2000	<2000	<25000
	1/27/04	12.81	221.16	221.16	Trace	--	--	--	--	--	--	--	--	--	--	--
233.97	5/13/04	11.85	222.12	222.12	--	90000	8500	37000	3200	20000	--	<500	<2500	<2500	<2500	<12000
	8/2/04	11.70	222.27	222.27	--	73000	9600	32000	3600	22000	--	<400	<2000	<2000	<2000	<10000
	11/4/04	11.55	222.42	222.42	--	<250000	8500	38000	3000	18000	--	<500	<2500	<2500	<2500	<12000
MW-2 103.64	4/1/97	18.68	--	218.68	--	4700	360	1400	180	110	--	--	--	--	--	--
	7/9/98	17.82	85.82	219.54	--	1900	200	230	110	310	ND	--	--	--	--	--
	3/29/99	18.50	85.14	218.86	--	3000	530	220	160	320	<400	--	--	--	--	--
	5/24/99	18.02	85.62	219.34	--	1600	180	<1.2	49	130	17	<5.0	--	--	--	--
	8/23/99	18.17	85.47	219.19	--	<500	140	93	55	96	<10	--	--	--	--	--
	10/22/99	18.26	85.38	219.10	--	2700	300	340	130	320	<100	--	--	--	--	--
	2/7/00	18.02	85.62	219.34	--	1000	130	170	59	160	<40	<1.0	--	--	--	--
	4/21/00	17.91	85.73	219.45	--	640	76	110	30	91	4.9	<2.0	--	--	--	--
	8/8/00	17.81	85.83	219.55	--	660	86	130	29	98	--	<1.0	<5.0	<5.0	<5.0	<50
	10/26/00	17.32	86.32	220.04	--	580	66	120	22	81	--	<1.0	<5.0	<5.0	<5.0	<50
	1/22/01	17.09	86.55	220.27	--	1300	170	280	65	200	--	<1.0	<5.0	<5.0	<5.0	76
	5/9/01	15.72	87.92	221.64	--	930	110	160	31	120	--	<1.0	<5.0	<5.0	<5.0	63
	9/21/01	15.49	88.15	221.87	--	900	130	180	44	150	--	<1.0	<2.0	<2.0	<2.0	72
	11/27/01	15.35	88.29	222.01	--	990	110	160	42	150	--	<1.2	<2.5	<2.5	<2.5	57
	1/15/02	15.08	88.56	222.28	--	660	71	110	29	100	--	<1.0	<2.0	<2.0	<2.0	48

Table 2
Historic Groundwater Levels and Chemical Analysis Results
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation (feet)*	Corrected Groundwater Elevation (Feet)**	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethyl- benzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	DIPE [3] µg/L (ppb)	ETBE [3] µg/L (ppb)	TAME [3] µg/L (ppb)	TBA [3] µg/L (ppb)
237.36	5/30/02	14.76	222.60	222.60	--	8750	82	130	24	120	--	<1.0	<5.0	<5.0	<5.0	51
MW-2 continued	8/29/02	14.52	222.84	222.84	--	2400	160	190	69	380	--	<1.0	<2.0	<2.0	<2.0	180
	11/21/02	13.46	220.80	223.90	--	890	74	28	110	120	--	<1.0	<5.0	<5.0	<5.0	79
	1/21/03	14.89	222.47	222.47	--	<500	40	69	14	73	--	<1.0	<2.0	<2.0	<2.0	25
	1/27/04	13.94	223.42	223.42	--	<500	18	20	7.6	22	--	<1.0	<5.0	<5.0	<5.0	<25
237.36	5/13/04	13.84	223.52	223.52	--	540	92	54	32	170	--	<1.0	<5.0	<5.0	<5.0	73
	8/2/04	13.83	223.53	223.53	--	470	49	49	17	110	--	<1.0	<5.0	<5.0	<5.0	32
	11/4/04	13.34	224.02	224.02	--	950	21	110	34	200	--	<1.0	<5.0	<5.0	<5.0	<25
MW-3	4/1/97	15.71	--	218.07	--	80000	4280	24000	3300	22600	--	--	--	--	--	--
100.06	7/9/98	14.76	85.30	219.02	--	30000	1500	11000	1700	12000	ND	--	--	--	--	--
	3/29/99	15.48	84.58	218.30	--	90000	4800	26000	3100	21000	<10000	--	--	--	--	--
	5/24/99	15.08	84.98	218.70	--	83000	4300	18000	2300	15000	1400	<100	--	--	--	--
	8/23/99	15.09	84.97	218.69	--	68000	2500	17000	2900	18000	490	<100	--	--	--	--
	10/22/99	15.19	84.87	218.59	--	61000	2300	14000	2200	14000	<4000	--	--	--	--	--
	2/7/00	15.25	84.81	218.53	--	76000	3200	23000	3400	22000	<5000	<40	--	--	--	--
	4/21/00	14.55	85.51	219.23	--	67000	2500	21000	3500	21000	<500	<80	--	--	--	--
	8/8/00	14.44	85.62	219.34	--	71000	1700	17000	2700	17000	--	<100	<500	<500	<500	<5000
	10/26/00	14.25	85.81	219.53	--	59000	1800	17000	2700	17000	--	<100	<500	<500	<500	<5000
	1/22/01	14.29	85.77	219.49	--	74000	2300	26000	4200	27000	--	<2.5	<13	<13	<13	140
	5/9/01	13.12	86.94	220.66	--	59000	1100	12000	2200	14000	--	<80	<400	<400	<400	<4000
	9/21/01	12.93	87.13	220.85	--	50000	750	9500	2100	13000	--	<50	<100	<100	<100	<1200
	11/27/01	12.85	87.21	220.93	--	46000	980	11000	2400	14000	--	<100	<200	<200	<200	<2500
	1/15/02	12.76	87.30	221.02	--	53000	1300	12000	2500	16000	--	<100	<200	<200	<200	<2500
233.78	5/30/02	12.30	221.48	221.48	--	47000	1500	9600	2200	13000	--	<1.0	<5.0	<5.0	<5.0	<25
	8/29/02	12.00	221.78	221.78	--	37000	720	7100	1600	11000	--	<100	<200	<200	<200	<2500
	11/21/02	12.45	221.33	221.33	--	37000	700	1700	7300	10000	--	<100	<500	<500	<500	<2500
	1/21/03	12.61	221.17	221.17	--	42000	1200	8700	1900	12000	--	<100	<200	<200	<200	<2500
	1/27/04	12.10	221.68	221.68	--	25000	760	4800	1200	6800	--	<100	<500	<500	<500	<2500
233.78	5/13/04	11.19	222.59	222.59	--	13000	500	2500	640	3500	--	<20	<100	<100	<100	<500
	8/2/04	11.49	222.29	222.29	--	19000	1100	3800	930	5300	--	<25	<120	<120	<120	<620
	11/4/04	11.15	222.63	222.63	--	<50000	1100	8000	2200	13000	--	<100	<500	<500	<500	<2500
MW-4	7/9/98	15.07	84.18	217.89	--	5200	480	1200	130	1100	ND	--	--	--	--	--
99.25	3/29/99	15.75	83.50	217.21	--	5700	690	1200	90	840	<2000	--	--	--	--	--
	5/24/99	15.54	83.71	217.42	--	4500	410	720	60	540	<250	--	--	--	--	--
	8/23/99	15.56	83.69	217.40	--	4300	440	940	94	750	27	<10	--	--	--	--
	10/22/99	15.61	83.64	217.35	--	6000	620	1300	120	930	<400	--	--	--	--	--
	2/7/00	15.77	83.48	217.19	--	5800	510	1300	130	1000	<250	<10	--	--	--	--
	4/21/00	15.06	84.19	217.90	--	9000	1500	3000	270	2100	<100	<20	--	--	--	--
	8/8/00	14.81	84.44	218.15	--	15000	1400	3300	280	2300	--	<20	<100	<100	<100	2300
	10/26/00	14.65	84.60	218.31	--	4400	460	1100	100	770	--	<5.0	<25	<25	<25	990
	1/22/01	14.51	84.74	218.45	--	3800	380	880	84	610	--	<10	<50	<50	<50	870

Table 2
Historic Groundwater Levels and Chemical Analysis Results
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater		Corrected Groundwater Elevation (Feet)**	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	Ethyl-Total										TAME [3] µg/L (ppb)	TBA [3] µg/L (ppb)
			Elevation (feet)*					Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	benzene [2] µg/l (ppb)	Xylenes [2] µg/l (ppb)	MTBE [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	DIPE [3] µg/L (ppb)	ETBE [3] µg/L (ppb)				
MW-4 continued	5/9/01	13.44	85.81		219.52	--	3400	320	700	61	510	--	<10	<50	<50	<50	720		
	9/21/01	13.42	85.83		219.54	--	2900	310	600	54	430	--	<4.0	<8.0	<8.0	<8.0	800		
	11/27/01	13.37	85.88		219.59	--	3400	300	660	72	530	--	<5.0	<10	<10	<10	880		
	1/15/02	13.42	85.83		219.54	--	2800	260	640	70	510	--	<1.0	<2.0	<2.0	<2.0	680		
232.96	5/30/02	13.00	219.96		219.96	--	4500	310	790	100	680	--	<1.0	<5.0	<5.0	<5.0	790		
	8/29/02	12.65	220.31		220.31	--	2900	270	620	77	530	--	<5.0	<10	<10	<10	840		
	11/21/02	13.01	219.95		219.95	--	2700	200	67	500	440	--	<10	<50	<50	<50	960		
	1/21/03	13.18	219.78		219.78	--	2700	180	510	79	520	--	<10	<20	<20	<20	750		
	1/27/04	12.66	220.30		220.30	--	10000	290	2300	360	2100	--	<5.0	<25	<25	<25	350		
232.96	5/13/04	11.89	221.07		221.07	--	8800	370	2600	400	2400	--	<40	<200	<200	<200	<1000		
	8/2/04	11.80	221.16		221.16	--	8700	400	2000	390	2200	--	<10	<50	<50	<50	350		
	11/4/04	11.60	221.36		221.36	--	<20000	390	2800	380	2200	--	<40	<200	<200	<200	<1000		
MW-5 99.01	7/9/98	16.65	82.36		216.12	--	78000	11000	40000	2200	16000	ND	--	--	--	--	--		
	3/29/99	16.80	82.21		215.97	--	130000	15000	43000	2600	18000	<10000	--	--	--	--	--		
	5/24/99	16.60	82.41		216.17	--	120000	14000	39000	2300	16000	740	<5.0	--	--	--	--		
	8/23/99	--	--		--	--	--	--	--	--	--	<5000	--	--	--	--	--		
	10/22/99	16.61	82.40		216.16	--	99000	10000	31000	1900	13000	--	--	--	--	--	--		
	2/7/00	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--		
	4/21/00	16.20	82.81		216.57	--	110000	14000	41000	2900	18000	<1000	<200	--	--	--	--		
	8/8/00	16.11	82.90		216.66	--	140000	13000	44000	2700	18000	--	<200	<1000	<1000	<1000	<10000		
	10/26/00	16.02	82.99		216.75	--	130000	17000	51000	3100	19000	--	<200	<1000	<1000	<1000	<10000		
	1/22/01	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/9/01	14.82	84.19		217.95	--	97000	9200	29000	1900	12000	--	<100	<500	<500	<500	<5000		
	9/21/01	14.47	84.54		218.30	--	60000	6100	18000	1400	8800	--	<200	<400	<400	<400	<5000		
	11/27/01	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--		
232.77	1/15/02	14.46	84.55		218.31	--	94000	12000	35000	2400	16000	--	<200	<400	<400	<400	<5000		
	5/30/02	14.32	218.45		218.45	--	110000	11000	2000	30000	17000	--	<10	<50	<50	<50	1300		
	8/29/02	13.94	218.83		218.83	--	110000	9900	32000	2300	15000	--	<200	<400	<400	<400	<5000		
	11/21/02	14.14	218.63		218.63	--	76000	8500	2200	27000	13000	--	<400	<2000	<2000	<2000	<10000		
	1/21/03	14.13	218.64		218.64	--	88000	8400	27000	2300	14000	--	<1000	<2000	<2000	<2000	<25000		
	1/27/04	Blocked by vehicle			--	--	--	--	--	--	--	--	--	--	--	--	--		
	5/13/04	12.75	220.02		220.02	--	<50000	6000	20000	1600	9900	--	<400	<2000	<2000	<2000	<10000		
232.77	8/2/04	12.57	220.20		220.20	--	56000	7200	24000	2100	13000	--	<200	<1000	<1000	<1000	<5000		
	11/4/04	11.06	221.71		221.71	--	<25000	1600	5900	560	3100	--	<50	<250	<250	<250	<1200		
MW-6 94.03	7/9/98	17.41	76.62		210.35	--	ND	ND	ND	ND	ND	ND	--	--	--	--	--		
	3/29/99	18.92	75.11		208.84	--	<500	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--		
	5/24/99	18.07	75.96		209.69	--	<500	0.68	<0.50	<0.50	2.3	<10	--	--	--	--	--		
	8/23/99	19.02	75.01		208.74	--	<500	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--		
	10/22/99	17.89	76.14		209.87	--	<500	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--		
	2/7/00	18.21	75.82		209.55	--	<500	<0.50	<0.50	<0.50	<1.5	<10	--	--	--	--	--		
	4/21/00	18.23	75.80		209.53	--	<500	2.8	16	2.5	15	<1.0	--	--	--	--	--		

Table 2
Historic Groundwater Levels and Chemical Analysis Results
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation (feet)*	Corrected Groundwater Elevation (Feet)**	LPH Thickness (feet)	TPH-g [1] µg/l (ppb)	Benzene [2] µg/l (ppb)	Toluene [2] µg/l (ppb)	Ethylbenzene [2] µg/l (ppb)	Total Xylenes [2] µg/l (ppb)	MTBE [2] µg/l (ppb)	MTBE [3] µg/l (ppb)	DIPE [3] µg/L (ppb)	ETBE [3] µg/L (ppb)	TAME [3] µg/L (ppb)	TBA [3] µg/L (ppb)
MW-6 continued	8/8/00	18.22	75.81	209.54	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<50
	10/26/00	18.12	75.91	209.64	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	--	<50
	1/22/01	18.32	75.71	209.44	--	<500	1.3	0.91	<0.50	2.5	<1.0	--	--	--	--	--
	5/9/01	17.85	76.18	209.91	--	<500	1.1	2.5	<0.50	2.1	--	<1.0	<5.0	<5.0	<5.0	<50
	9/21/01	17.31	76.72	210.45	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
227.76	11/27/01	17.10	76.93	210.66	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/15/02	16.94	77.09	210.82	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	5/30/02	16.84	77.92	210.92	--	800	34	190	25	160	--	<1.0	<5.0	<5.0	<5.0	<25
	8/29/02	16.48	211.28	211.28	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	11/21/02	16.24	211.52	211.52	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	41
227.76	1/21/03	16.19	211.57	211.57	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	69
	1/27/04	15.00	212.76	212.76	--	1800	79	490	45	260	--	<1.0	<5.0	<5.0	<5.0	790
	5/13/04	14.75	213.01	213.01	--	<5000	220	1000	110	680	--	<1.0	<5.0	<5.0	<5.0	1000
	8/2/04	14.59	213.17	213.17	--	1100	76	380	39	260	--	<5.0	<25	<25	<25	680
	11/4/04	14.43	213.33	213.33	--	<5000	250	1200	120	720	--	<1.0	<5.0	<5.0	<5.0	970
MW-7 93.86 234.22	11/27/01	17.33	76.53	216.89	--	<500	9.8	15	13	58	--	<1.0	<2.0	<2.0	<2.0	140
	1/15/02	17.09	76.77	217.13	--	<500	33	47	15	76	--	<1.0	<2.0	<2.0	<2.0	130
	5/30/02	16.78	217.44	217.44	--	<50	11	16	15	51	--	<1.0	<5.0	<5.0	<5.0	140
	8/29/02	16.62	217.60	217.60	--	<500	4	4.5	8.7	34	--	<1.0	<2.0	<2.0	<2.0	140
	11/21/02	16.65	217.57	217.57	--	<500	2.5	5.8	3.8	26	--	<1.0	<5.0	<5.0	<5.0	130
234.22	1/21/03	16.77	217.45	217.45	--	<500	7.1	23	7.0	25	--	<1.0	<2.0	<2.0	<2.0	600
	1/27/04	15.79	218.43	218.43	--	<500	1.3	2.6	1.2	7.6	--	<1.0	<5.0	<5.0	<5.0	86
	5/13/04	15.25	218.97	218.97	--	<500	1.5	3.2	0.61	3.5	--	<1.0	<5.0	<5.0	<5.0	66
	8/2/04	14.88	219.34	219.34	--	140	4.2	11	1.4	7.6	--	<1.0	<5.0	<5.0	<5.0	59
	11/4/04	14.55	219.67	219.67	--	<500	3.1	8.0	1.0	5.6	--	<1.0	<5.0	<5.0	<5.0	57
MW-8 95.96 229.67	11/27/01	11.92	84.04	217.75	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	1/15/02	12.02	83.94	217.65	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	5/30/02	11.39	218.28	218.28	--	570	31	170	22	130	--	<1.0	<5.0	<5.0	<5.0	<25
	8/29/02	11.22	218.45	218.45	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<2.0	<2.0	<2.0	<25
	11/21/02	11.42	218.25	218.25	--	<500	6.7	4.7	35	29	--	<1.0	<2.0	<2.0	<2.0	<25
229.67	1/21/03	11.61	218.06	218.06	--	<500	0.51	1.4	0.62	3.1	--	<1.0	<2.0	<2.0	<2.0	<25
	1/27/04	11.28	218.39	218.39	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	5/13/04	10.65	219.02	219.02	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	8/2/04	11.06	218.61	218.61	--	<100	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	11/4/04	10.75	218.92	218.92	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
MW-9 100.50 227.53	11/27/01	15.44	85.06	212.09	--	1800	120	490	59	370	--	<5.0	<10	<10	<10	250
	1/15/02	15.43	85.07	212.10	--	1300	96	390	45	250	--	<5.0	<10	<10	<10	320
	5/30/02	15.49	212.04	212.04	--	4600	98	430	53	270	--	<1.0	<5.0	<5.0	<5.0	370
	8/29/02	15.29	212.24	212.24	--	1800	130	520	57	370	--	<2.5	<5.0	<5.0	<5.0	410
	11/21/02	15.26	212.27	212.27	--	<500	13	7.3	51	38	--	<4.0	<20	<20	<20	470

Table 2
Historic Groundwater Levels and Chemical Analysis Results
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Well No. and Elevation (feet)*	Date	DTW (feet)	Groundwater Elevation (feet)*	Corrected Groundwater Elevation (feet)**	LPH Thickness (feet)	TPH-g [1] (ppb)	Benzene [2] (ppb)	Toluene [2] (ppb)	Ethyl-benzene [2] (ppb)	Total Xylenes [2] (ppb)	MTBE [2] (ppb)	MTBE [3] (ppb)	DIPE [3] (ppb)	ETBE [3] (ppb)	TAME [3] (ppb)	TBA [3] (ppb)
MW-9 continued 227.53	1/21/03	15.21	212.32	212.32	--	<500	10	57	15	86	--	<1.0	<2.0	<2.0	<2.0	110
	1/27/04	14.09	213.44	213.44	--	1100	89	400	40	240	--	<1.0	<5.0	<5.0	<5.0	420
	5/13/04	13.62	213.91	213.91	--	1500	220	740	78	620	--	<1.0	<5.0	<5.0	<5.0	590
	8/2/04	13.58	213.95	213.95	--	1600	200	660	87	550	--	<1.0	<5.0	<5.0	<5.0	630
	11/4/04	13.50	214.03	214.03	--	<5000	300	970	120	760	--	<1.0	<5.0	<5.0	<5.0	600
MW-10 207.75	5/13/04	26.95	180.80	180.80	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	8/2/04	26.89	180.86	180.86	--	<100	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25
	11/4/04	25.04	182.71	182.71	--	<500	<0.50	<0.50	<0.50	<1.5	--	<1.0	<5.0	<5.0	<5.0	<25

Notes: [1] Historically analyzed for Total Petroleum Hydrocarbons as Gasoline by modified EPA method 8015B. Currently analyzed by EPA Method 8260B. [2] Historically analyzed by EPA method 8021. Currently analyzed by EPA Method 8260B. [3] Analyzed by EPA method 8260B.

Definitions: feet* = Feet above mean sea level, ** = Groundwater elevation calculated to most recent survey data, LPH= Liquid Phase Hydrocarbons, Sheen = Discontinuous, non-measurable thickness of LPH, Trace = Continuous, non-measurable thickness of LPH, MTBE = Methyl tert-Butyl Ether, ETBE = Ethyl tert-Butyl Ether, TAME = tert-Amyl Methyl Ether, TBA = tert-Butyl Alcohol, µg/l = micrograms per liter, ppb = parts per billion, -- = Not Measured, ND = Not Detected, DTW = Depth to Water, TPH = Total Petroleum Hydrocarbons, DIPE = Di Isopropyl Ether.

Monitoring and sampling activities conducted by SECOR after 2/1/02. GEIMS Global ID # T0607399173

Original survey data measured as feet above an arbitrary datum. All groundwater elevation data after 5/30/02 event calculated using April 20, 2004 survey data.

TABLE 3
SUMMARY OF BENEFICIAL GROUNDWATER AND SURFACE WATER USES

Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

San Dieguito Hydrologic Unit (905.00)*
Solana Beach Hydrologic Area (905.10)
Rancho Santa Fe Hydrologic Subarea (905.11)

Beneficial Use	Groundwater	Surface Water
Municipal/Domestic Supply	X	+
Agricultural Supply	X	O
Industrial Process Supply		
Industrial Service Supply	X	O
Groundwater Recharge		
Freshwater Replenishment		
Hydropower Generation		
Water Contact Recreation (REC 1)		X
Non-contact Water Recreation (REC 2)		X
Warm Freshwater Habitat		X
Cold Freshwater Habitat		
Wildlife Habitat		X
Biological Habitats of Special Significance		

Notes: *From California State Water Resources Board and Regional Water Quality Control Board, San Diego Region, "Water Quality Control Plan, San Diego Basin (9), 1996".

x = Existing beneficial use
o = Potential beneficial use
+ = Excepted from municipal use

TABLE 4
SUMMARY OF WELL GAUGING AND ELEVATION DATA

Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

Well No.	Date	SWE	DTW (feet bgs)	LPH Thickness (feet)	GWE (feet)
MW-1	04/01/97	100.25*	16.60	--	83.65*
	07/09/98	100.25*	15.85	--	84.40*
	03/29/99	100.25*	15.75	--	84.50*
	05/24/99	100.25*	15.79	--	84.46*
	08/23/99	100.25*	15.80	--	84.45*
	10/22/99	100.25*	15.89	--	84.36*
	02/07/00	100.25*	15.80	Sheen	84.45*
	04/21/00	100.25*	15.28	Sheen	84.97*
	08/08/00	100.25*	15.14	Sheen	85.11*
	10/26/00	100.25*	15.05	Sheen	85.20*
	01/22/01	100.25*	15.02	Sheen	85.23*
	05/09/01	100.25*	13.69	Sheen	86.56*
	09/21/01	100.25*	13.70	Sheen	86.55*
	11/27/01	100.25*	13.60	Sheen	86.65*
	01/15/02	100.25*	13.46	Sheen	86.79*
	05/30/02	233.97	13.30	Trace	220.67
	08/29/02	233.97	12.82	Trace	221.15
	11/21/02	233.97	13.17	Trace	220.80
	01/21/03	233.97	13.32	Trace	220.65
	01/27/04	233.97	12.81	Trace	221.16
MW-2	05/13/04	233.97	11.85	--	222.12
	08/02/04	233.97	11.70	--	222.27
	11/04/04	233.97	11.55	--	222.42
	04/01/97	103.64*	18.68	--	84.96*
	07/09/98	103.64*	17.82	--	85.82*
	03/29/99	103.64*	18.50	--	85.14*
	05/24/99	103.64*	18.02	--	85.62*
	08/23/99	103.64*	18.17	--	85.47*
	10/22/99	103.64*	18.26	--	85.38*
	02/07/00	103.64*	18.02	--	85.62*
	04/21/00	103.64*	17.91	--	85.73*
	08/08/00	103.64*	17.81	--	85.83*
	10/26/00	103.64*	17.32	--	86.32*
	01/22/01	103.64*	17.09	--	86.55*
	05/09/01	103.64*	15.72	--	87.92*
	09/21/01	103.64*	15.49	--	88.15*
	11/27/01	103.64*	15.35	--	88.29*
	01/15/02	103.64*	15.08	--	88.56*
	05/30/02	237.36	14.76	--	222.60
	08/29/02	237.36	14.52	--	222.84
	11/21/02	237.36	13.46	--	223.90
	01/21/03	237.36	14.89	--	222.47
	01/27/04	237.36	13.94	--	223.42
	05/13/04	237.36	13.84	--	223.52
	08/02/04	237.36	13.83	--	223.53
	11/04/04	237.36	13.34	--	224.02

TABLE 4
SUMMARY OF WELL GAUGING AND ELEVATION DATA
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

Well No.	Date	SWE	DTW (feet bgs)	LPH Thickness (feet)	GWE (feet)
MW-3	04/01/97	100.06*	15.71	--	84.35*
	07/09/98	100.06*	14.76	--	85.30*
	03/29/99	100.06*	15.48	--	84.58*
	05/24/99	100.06*	15.08	--	84.98*
	08/23/99	100.06*	15.09	--	84.97*
	10/22/99	100.06*	15.19	--	84.87*
	02/07/00	100.06*	15.25	--	84.81*
	04/21/00	100.06*	14.55	--	85.51*
	08/08/00	100.06*	14.44	--	85.62*
	10/26/00	100.06*	14.25	--	85.81*
	01/22/01	100.06*	14.29	--	85.77*
	05/09/01	100.06*	13.12	--	86.94*
	09/21/01	100.06*	12.93	--	87.13*
	11/27/01	100.06*	12.85	--	87.21*
	01/15/02	100.06*	12.76	--	87.30*
	05/30/02	233.78	12.30	--	221.48
	08/29/02	233.78	12.00	--	221.78
	11/21/02	233.78	12.45	--	221.33
	01/21/03	233.78	12.61	--	221.17
	01/27/04	233.78	12.10	--	221.68
	05/13/04	233.78	11.19	--	222.59
	08/02/04	233.78	11.49	--	222.29
	11/04/04	233.78	11.15	--	222.63
MW-4	07/09/98	99.25*	15.07	--	84.18*
	03/29/99	99.25*	15.75	--	83.50*
	05/24/99	99.25*	15.54	--	83.71*
	08/23/99	99.25*	15.56	--	83.69*
	10/22/99	99.25*	15.61	--	83.64*
	02/07/00	99.25*	15.77	--	83.48*
	04/21/00	99.25*	15.06	--	84.19*
	08/08/00	99.25*	14.81	--	84.44*
	10/26/00	99.25*	14.65	--	84.60*
	01/22/01	99.25*	14.51	--	84.74*
	05/09/01	99.25*	13.44	--	85.81*
	09/21/01	99.25*	13.42	--	85.83*
	11/27/01	99.25*	13.37	--	85.88*
	01/15/02	99.25*	13.42	--	85.83*
	05/30/02	232.96	13.00	--	219.96
	08/29/02	232.96	12.65	--	220.31
	11/21/02	232.96	13.01	--	219.95
	01/21/03	232.96	13.18	--	219.78
	01/27/04	232.96	12.66	--	220.30
	05/13/04	232.96	11.89	--	221.07
	08/02/04	232.96	11.80	--	221.16
	11/04/04	232.96	11.60	--	221.36

TABLE 4
SUMMARY OF WELL GAUGING AND ELEVATION DATA
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

Well No.	Date	SWE	DTW (feet bgs)	LPH Thickness (feet)	GWE (feet)
MW-5	07/09/98	99.01*	16.65	--	82.36*
	03/29/99	99.01*	16.80	--	82.21*
	05/24/99	99.01*	16.60	--	82.41*
	08/23/99	99.01*	--	--	--
	10/22/99	99.01*	16.61	--	82.40*
	02/07/00	99.01*	--	--	--
	04/21/00	99.01*	16.20	--	82.81*
	08/08/00	99.01*	16.11	--	82.90*
	10/26/00	99.01*	16.02	--	82.99*
	01/22/01	99.01*	--	--	--
	05/09/01	99.01*	14.82	--	84.19*
	09/21/01	99.01*	14.47	--	84.54*
	11/27/01	99.01*	--	--	--
	01/15/02	99.01*	14.46	--	84.55*
	05/30/02	232.77	14.32	--	218.45
	08/29/02	232.77	13.94	--	218.83
	11/21/02	232.77	14.14	--	218.63
	01/21/03	232.77	14.13	--	218.64
	01/27/04	232.77	Blocked by vehicle	--	--
	05/13/04	232.77	12.75	--	220.02
	08/02/04	232.77	12.57	--	220.20
	11/04/04	232.77	11.06	--	221.71
MW-6	07/09/98	94.03*	17.41	--	76.62*
	03/29/99	94.03*	18.92	--	75.11*
	05/24/99	94.03*	18.07	--	75.96*
	08/23/99	94.03*	19.02	--	75.01*
	10/22/99	94.03*	17.89	--	76.14*
	02/07/00	94.03*	18.21	--	75.82*
	04/21/00	94.03*	18.23	--	75.80*
	08/08/00	94.03*	18.22	--	75.81*
	10/26/00	94.03*	18.12	--	75.91*
	01/22/01	94.03*	18.32	--	75.71*
	05/09/01	94.03*	17.85	--	76.18*
	09/21/01	94.03*	17.31	--	76.72*
	11/27/01	94.03*	17.10	--	76.93*
	01/15/02	94.03*	16.94	--	77.09*
	05/30/02	227.76	16.84	--	210.92
	08/29/02	227.76	16.48	--	211.28
	11/21/02	227.76	16.24	--	211.52
	01/21/03	227.76	16.19	--	211.57
	01/27/04	227.76	15.00	--	212.76
	05/13/04	227.76	14.75	--	213.01
	08/02/04	227.76	14.59	--	213.17
	11/04/04	227.76	14.43	--	213.33
MW-7	11/27/01	93.86*	17.33	--	76.53*
	01/15/02	93.86*	17.09	--	76.77*
	05/30/02	234.22	16.78	--	217.44
	08/29/02	234.22	16.62	--	217.60
	11/21/02	234.22	16.65	--	217.57
	01/21/03	234.22	16.77	--	217.45
	01/27/04	234.22	15.79	--	218.43
	05/13/04	234.22	15.25	--	218.97
	08/02/04	234.22	14.88	--	219.34
	11/04/04	234.22	14.55	--	219.67

TABLE 4
SUMMARY OF WELL GAUGING AND ELEVATION DATA
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

Well No.	Date	SWE	DTW (feet bgs)	LPH Thickness (feet)	GWE (feet)
MW-8	11/27/01	95.96*	11.92	--	84.04*
	01/15/02	95.96*	12.02	--	83.94*
	05/30/02	229.67	11.39	--	218.28
	08/29/02	229.67	11.22	--	218.45
	11/21/02	229.67	11.42	--	218.25
	01/21/03	229.67	11.61	--	218.06
	01/27/04	229.67	11.28	--	218.39
	05/13/04	229.67	10.65	--	219.02
	08/02/04	229.67	11.06	--	218.61
	11/04/04	229.67	10.75	--	218.92
MW-9	11/27/01	100.50*	15.44	--	85.06*
	01/15/02	100.50*	15.43	--	85.07*
	05/30/02	227.53	15.49	--	212.04
	08/29/02	227.53	15.29	--	212.24
	11/21/02	227.53	15.26	--	212.27
	01/21/03	227.53	15.21	--	212.32
	01/27/04	227.53	14.09	--	213.44
	05/13/04	227.53	13.62	--	213.91
	08/02/04	227.53	13.58	--	213.95
	11/04/04	227.53	13.50	--	214.03
MW-10	05/13/04	207.75	26.95	--	180.80
	08/02/04	207.75	26.89	--	180.86
	11/04/04	207.75	25.04	--	182.71

Notes:

SWE	= Surveyed wellhead elevation
DTW	= Depth to water
BGS	= Below ground surface
LPH	= Liquid-phase hydrocarbons
GWE	= Groundwater Elevation (Feet above mean sea level)
Sheen	= Immeasurable thickness of LPH
Trace	= Less than 0.01 feet thick LPH
Asterisk (*)	= Feet above arbitrary datum elevation

TABLE 5

ESTIMATED VOLUME OF TPH-IMPACTED SOIL
Former Chevron Station 9-2795
6051 El Tordo, Rancho Santa Fe, California

Area of Concern	Volume Of Soil With TPH Concentrations Exceeding LMDLs				Mass of TPH in Soil with TPH Concentrations Exceeding LMDLs (1)		
	Area (ft ²)	Thickness (ft)	Volume (ft ³)	Volume (yd ³)	Mean (mg/kg)	Mass (lbs)	Gallons
<u>Estimated Volume</u>							
Soil in the vicinity of the former UST Pit and former pump island	2,800	10.0	28,000	1,037.0	765	2,355	361
TOTALS (soil remaining in place on-site)	2,800	10.0	28,000	1,037	765	2,355	361

Total estimated volume of impacted soil with TPH concentrations exceeding LMDLs:

1,037 yd³

Total mass of TPH in soil with TPH concentrations exceeding LMDLs:

2,355 lbs. or 361 gallons

Notes:

- (1) The mass calculations were made by multiplying the calculated soil volume by the geometric mean TPH concentration by the density of the soil (3,000 pounds per cubic yard assumed). When soil sample data was not available for a particular volume of soil, the geometric mean from the nearest volume of soil was used for mass calculations. Gallons of gasoline calculated by assuming one gallon of gasoline 6.53 pounds.

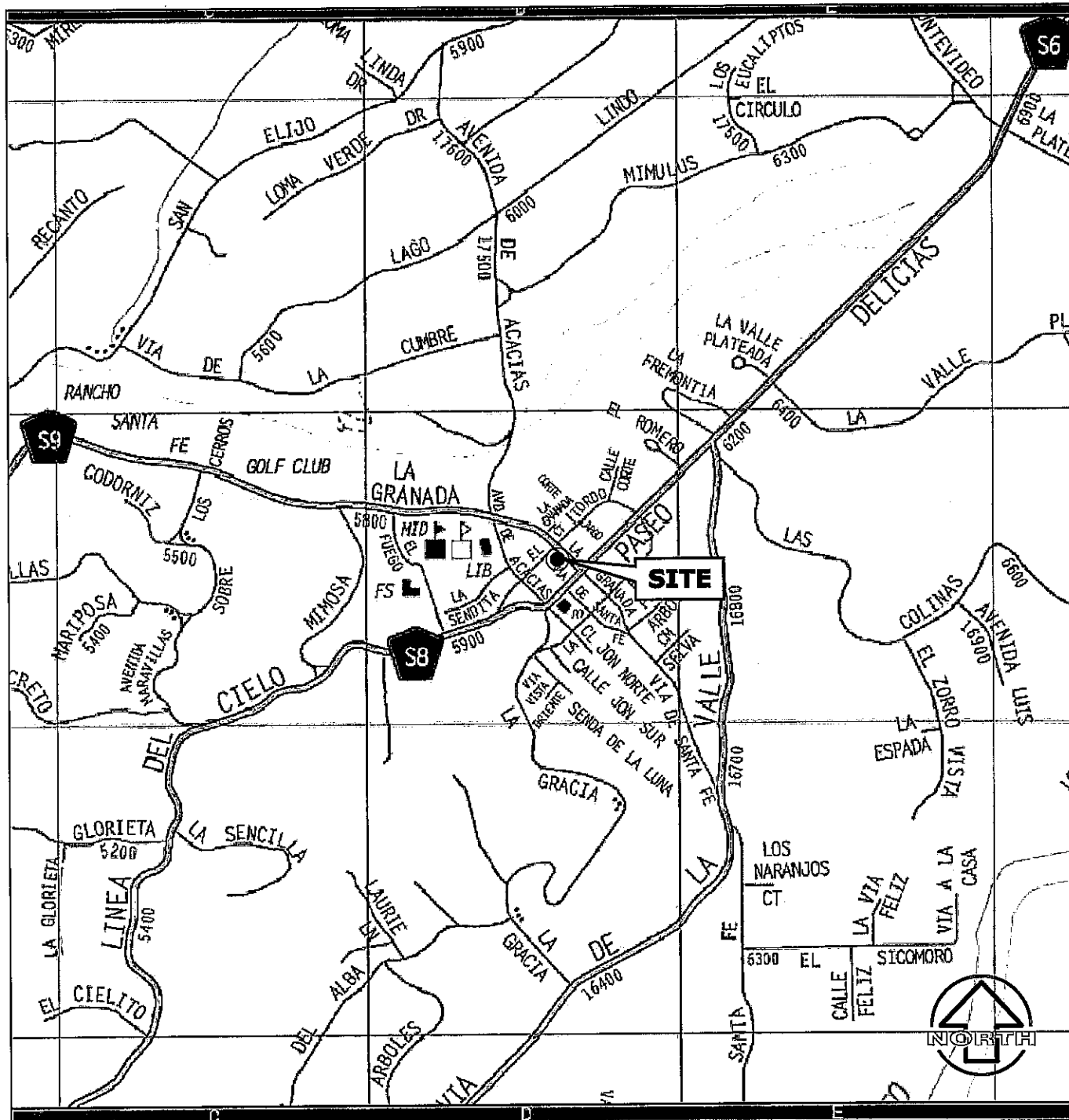
LMDLs = Laboratory method detection limits
 TPH = Total petroleum hydrocarbons
 mg/kg = Milligrams per kilogram
 ft² = Square feet
 ft = Feet
 ft³ = Cubic feet
 yd³ = Cubic yards
 lbs = Pounds
 UST = Underground storage tank

Table 6
Remedial Action Alternatives Technology Screening
Former Chevron Station 9-2795
6051 El Tordo, Rancho Santa Fe, California

Mass Removal Method	Retained	Desireable	Comments
Impacted Groundwater Recovery Using Recovery Wells and Stinger-Assisted Vacuum Trucks	Yes	Yes	Reduces mass in saturated zone.
High-Vacuum Dual Phase Extraction (with ex-situ treatment)	Yes	Yes	Generates high applied vacuum throughout the vadose zone impacted soil area. Removes hydrocarbon vapors (for thermal destruction), as well as impacted groundwater (for off-site treatment and disposal).
Natural Attenuation	Yes	Yes	Reduces mass in vadose zone. Well understood but slow. Can achieve target groundwater cleanup goal.

FIGURES

P:\CAD\ALLPROJECTS\2004\9-2795-2K\92795SLOC.DWG MODIFIED BY LHUNTER ON APR 12, 2005 - 14:51



REFERENCE: THOMAS GUIDE CD-ROM, PAGE & GRID 1168 D3.

0 1320 2640
APPROXIMATE SCALE IN FEET



SECOR

2655 Camino del Rio North, Suite 302
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619-296-6195/Fax 619-296-6198

PREPARED FOR:

FORMER CHEVRON STATION NO. 9-2795
6051 El Tordo
Rancho Santa Fe, California

JOB NUMBER:

MTCH.92795.08

DRAWN BY:

RJO

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APPROVED BY:

FIGURE:

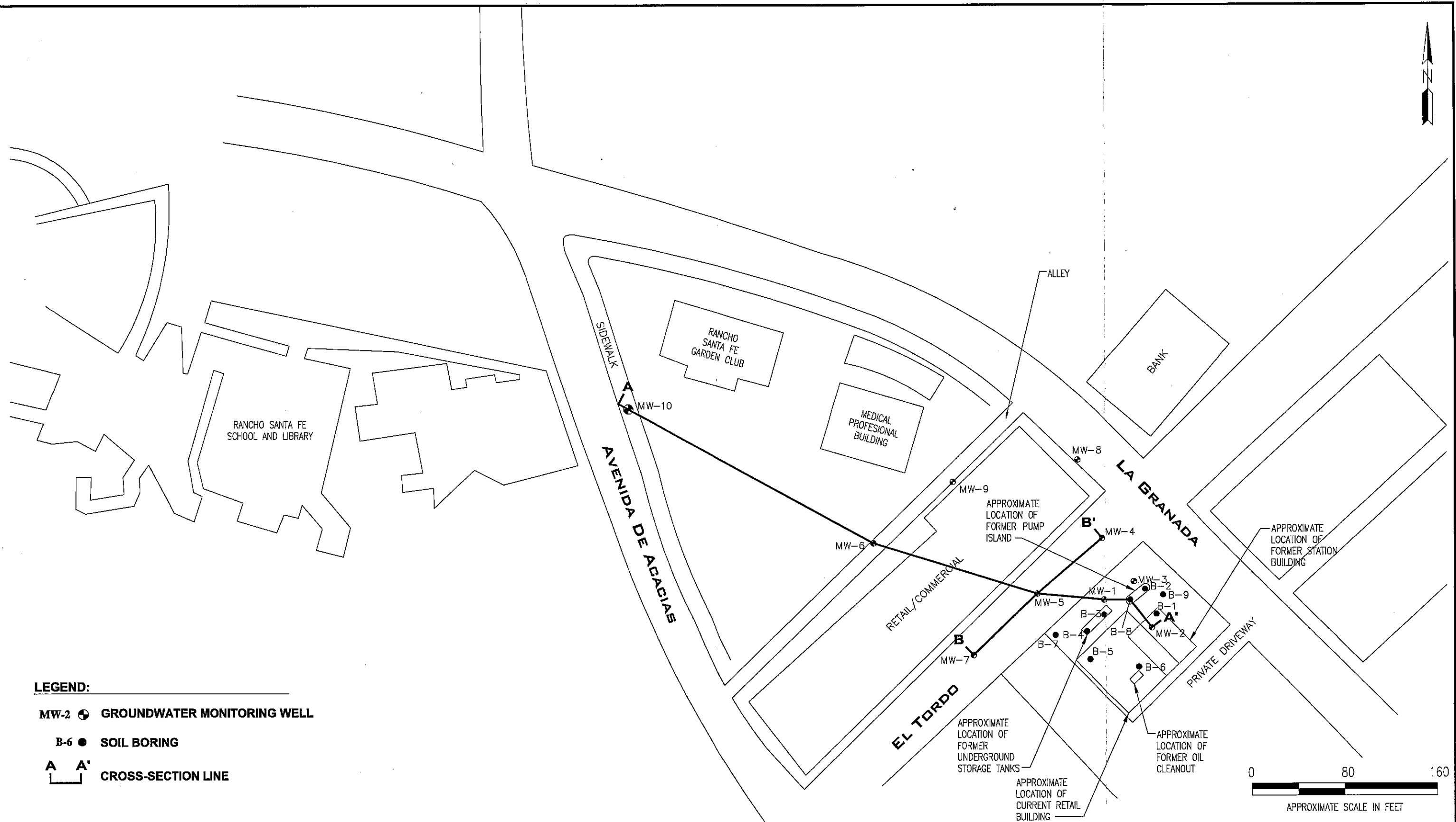
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DATE:

11/25/04

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LEGEND:

MW-2  GROUNDWATER MONITORING WELL

B-6  SOIL BORING

A A'  CROSS-SECTION LINE

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

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APPROVED: M. BARON
DATE: 4/29/04
JOB No.: MTCH.92795.08
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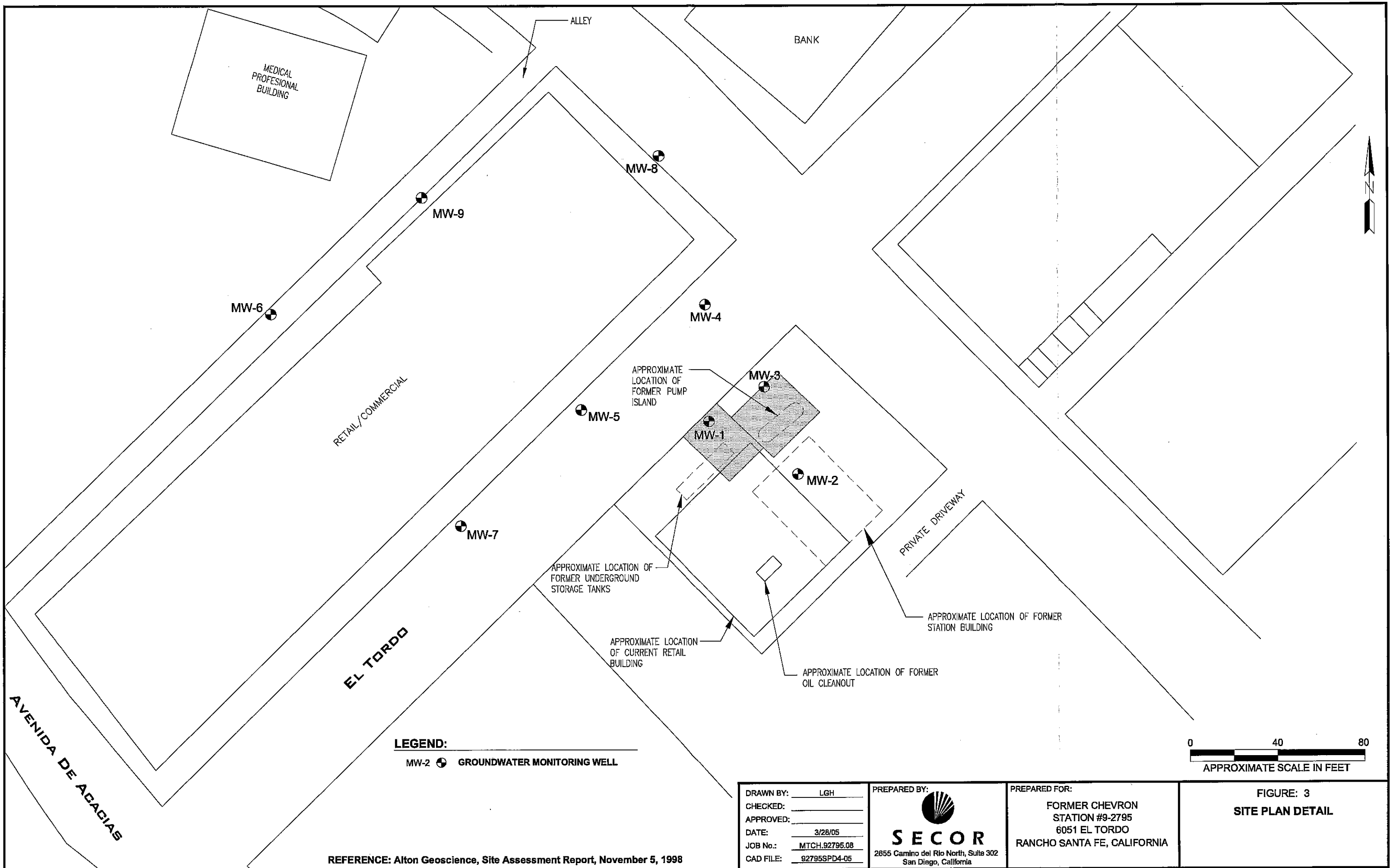
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RANCHO SANTA FE, CALIFORNIA

FIGURE: 2
SITE PLAN AND CROSS SECTION
TRACE

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REFERENCE: Alton Geoscience, Site Assessment Report, November 5, 1998

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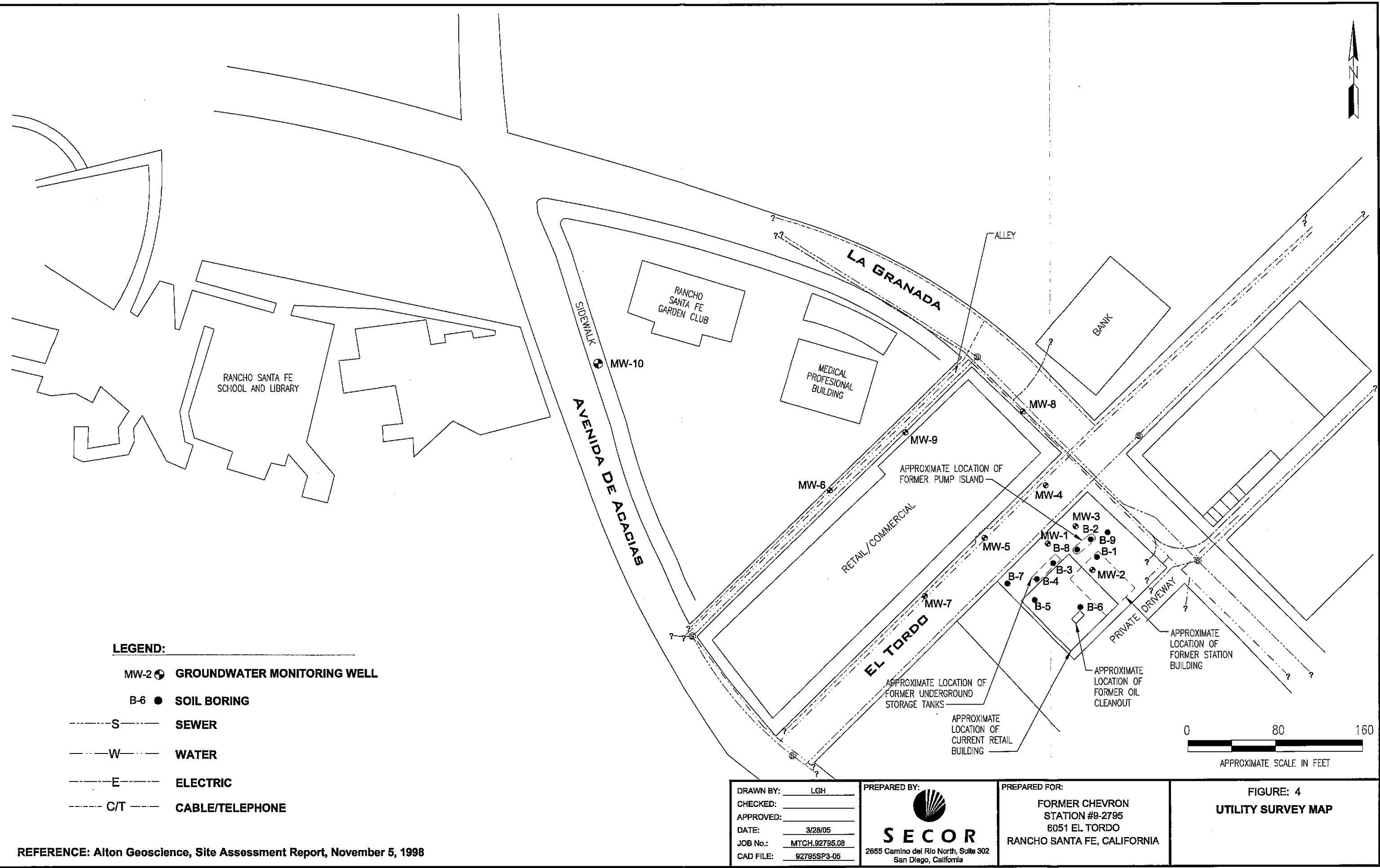
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FIGURE: 3
SITE PLAN DETAIL

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LEGEND:

MW-2  GROUNDWATER MONITORING WELL

B-6  SOIL BORING

DEPTH SAMPLE DEPTH IN FEET BELOW GROUND SURFACE

TPHg TOTAL PETROLEUM HYDROCARBONS AS GASOLINE IN MILLIGRAMS PER KILOGRAM (mg/kg)

B BENZENE (mg/kg)

MTBE METHYL TERT-BUTYL ETHER (mg/kg)

< BELOW LABORATORY REPORTING LIMIT INDICATED

NA NOT ANALYZED

* 0.041/ <0.0050=ANALYZED FOR MTBE BY EPA 8015B/
8021B ANALYZED FOR MTBE BY EPA 8260B

+ SOIL VAPOR RESULTS SHOWN IN MICROGRAMS PER LITER (µg/L)

 IMPACTED SOIL AREA (ESTIMATED)

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

MW-1			
DEPTH	TPHg	B	MTBE
5'	<1	<0.05	<0.10
10'	2.9	<0.05	<0.10
15'	4,000	15	<200
20'	1,300	<10	<200
25'	<1	0.065	<0.10
30'	<1	<0.05	<0.10
35'	1.2	0.081	<0.10
40'	<1	0.056	<0.10
45'	1.1	<0.05	<0.10
50'	<1	<0.05	<0.10

MW-8			
DEPTH	TPHg	B	MTBE
15'	<10	<0.050	0.059/ <0.0050 *
25'	<10	<0.050	<0.010
28'	<10	<0.050	<0.010

MW-4			
DEPTH	TPHg	B	MTBE
10'	<10	<0.050	<0.035
15'	<10	<0.050	<0.035
20'	<10	0.060	<0.035
25'	<10	<0.050	<0.035

MW-3			
DEPTH	TPHg	B	MTBE
5'	<1	<0.05	<0.10
10'	<1	<0.05	<0.10
15'	80	0.31	<4.0
20'	7.7	0.27	<0.10
25'	1.0	0.094	<0.10
30'	<1	<0.05	<0.10

B-8			
DEPTH	TPHg	B	MTBE
5'	5.4	<0.05	<0.10
10'	620	<0.2	<4.0
15'	1,900	7.3	<4.0
20'	4.3	0.11	<0.10
25'	1.6	0.12	<0.10
30'	44	0.090	<0.10
35'	<1	<0.05	<0.10

B-2			
DEPTH	TPHg	B	MTBE
5'	<1	0.006	NA
10'	2,300	34.60	NA
15'	1,600	22.10	NA
20'	550	8.40	NA

B-9			
DEPTH	TPHg	B	MTBE
5'	<1	<0.05	<0.10
10'	<1	<0.05	<0.10
15'	<1	<0.05	<0.10
20'	<1	<0.05	<0.10

B-1			
DEPTH	TPHg	B	MTBE
5'	<1	<0.005	NA
10'	<1	0.045	NA
15'	<1	0.09	NA
20'	<1	0.037	NA

MW-2			
DEPTH	TPHg	B	MTBE
5'	<1	<0.05	<0.10
10'	<1	<0.05	<0.10
15'	<1	<0.05	<0.10
20'	<1	<0.05	<0.10
25'	<1	<0.05	<0.10
30'	<1	<0.05	<0.10
35'	<1	0.05	<0.10

HA-4 +			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1
4.5'	<50	<1	<1

HA-5 +			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1
4.5'	<50	<1	<1

HA-6 +			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1
4.5'	<50	<1	<1

B-6			
DEPTH	TPHg	B	MTBE
2'	<1	<0.005	NA
5'	<1	<0.005	NA
8'	<1	<0.005	NA

HA-3 +			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1
5'	<50	<1	<1

B-5			
DEPTH	TPHg	B	MTBE
5'	<1	<0.005	NA
10'	<1	<0.005	NA
15'	<1	0.026	NA
20'	<1	0.069	NA

HA-2 +			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1
4.5'	<50	<1	<1

MW-5			
DEPTH	TPHg	B	MTBE
10'	<10	<0.050	<0.035
15.5'	<10	<0.050	<0.035
20'	<10	<0.050	<0.035
25'	<10	0.38	<0.035

MW-9			
DEPTH	TPHg	B	MTBE
15'	<10	<0.050	<0.010
25'	<10	<0.050	<0.010
28'	<10	<0.050	<0.010

MW-6			
DEPTH	TPHg	B	MTBE
15'	<10	<0.050	<0.035
20'	<10	<0.050	<0.035
25'	<10	<0.050	<0.035

HA-1			
DEPTH	TPHg	B	MTBE
1'	<50	<1	<1

B-7			
DEPTH	TPHg	B	MTBE
5'	<1	<0.05	<0.10
10'	<1	<0.05	<0.10
15'	<1	<0.05	<0.10
20'	2.1	0.090	<0.10

B-3			
DEPTH	TPHg	B	MTBE
5'	<1	<0.005	NA
10'	1,100	2.65	NA
15'	1,100	5.80	NA
20'	2,200	41.30	NA

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APPROVED: M. BARON
DATE: 4/01/05
JOB No.: MTCH.92795.08
CAD FILE: 9-2795PHSDM4-04

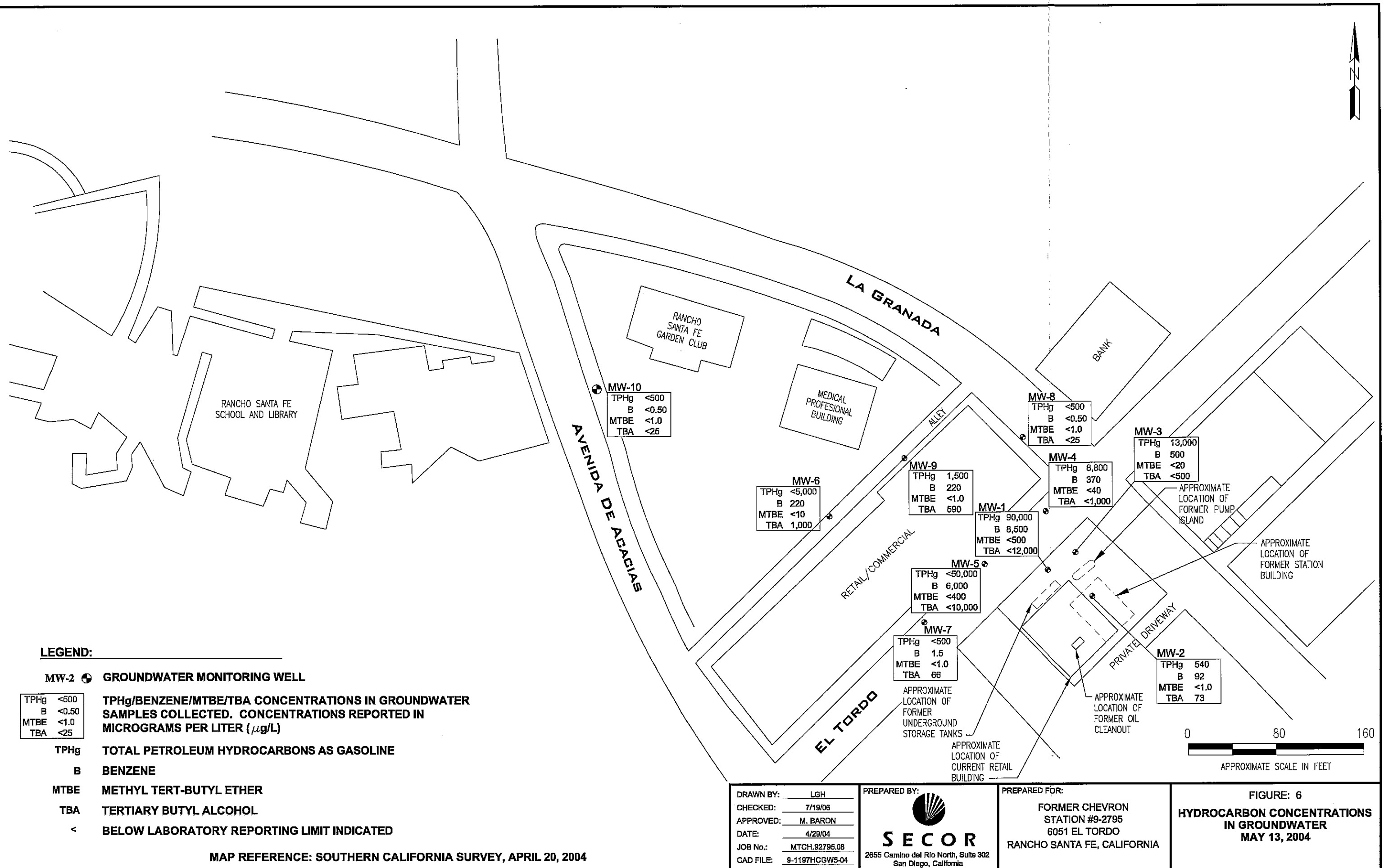
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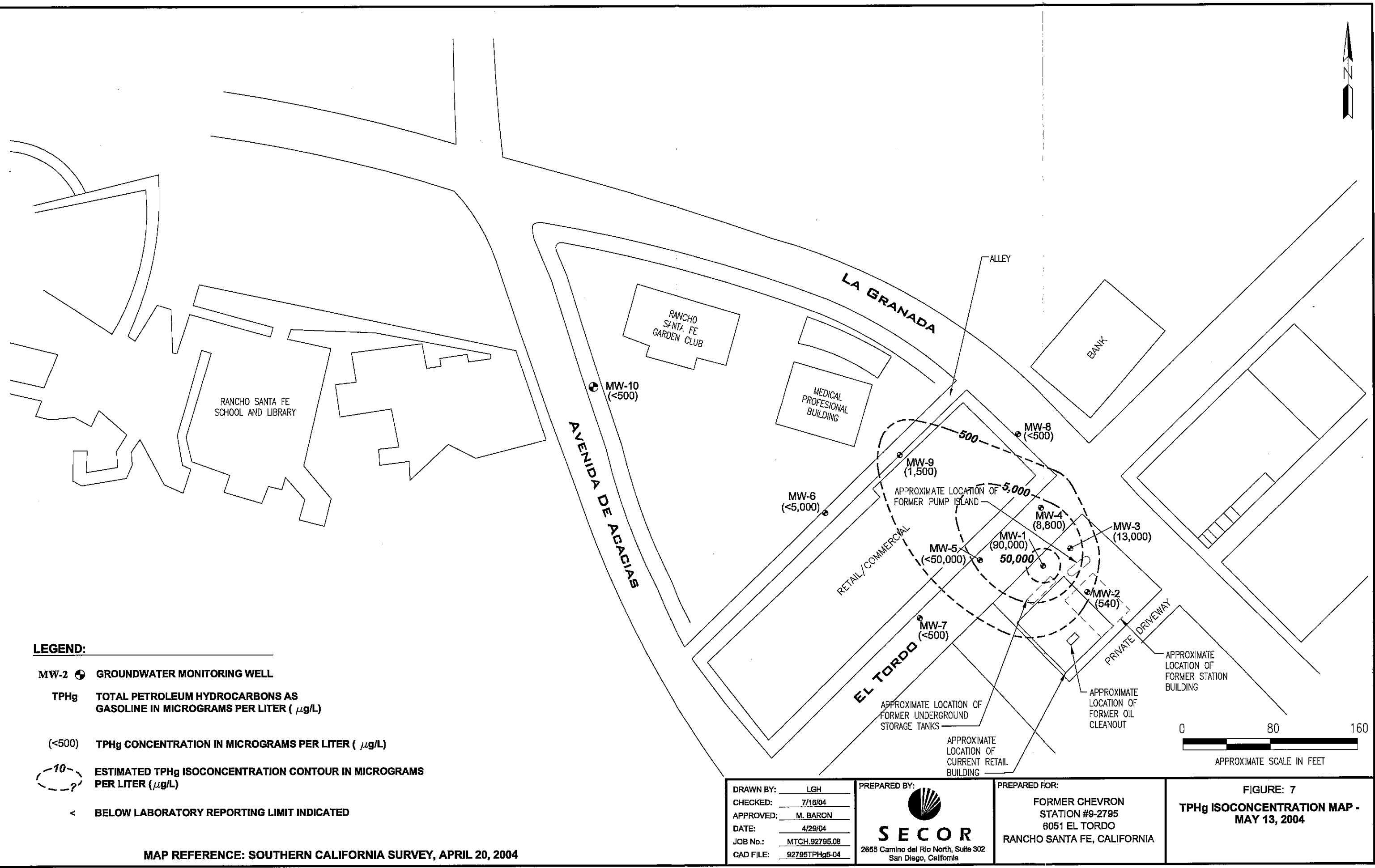
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RANCHO SANTA FE, CALIFORNIA

0 80 160
APPROXIMATE SCALE IN FEET

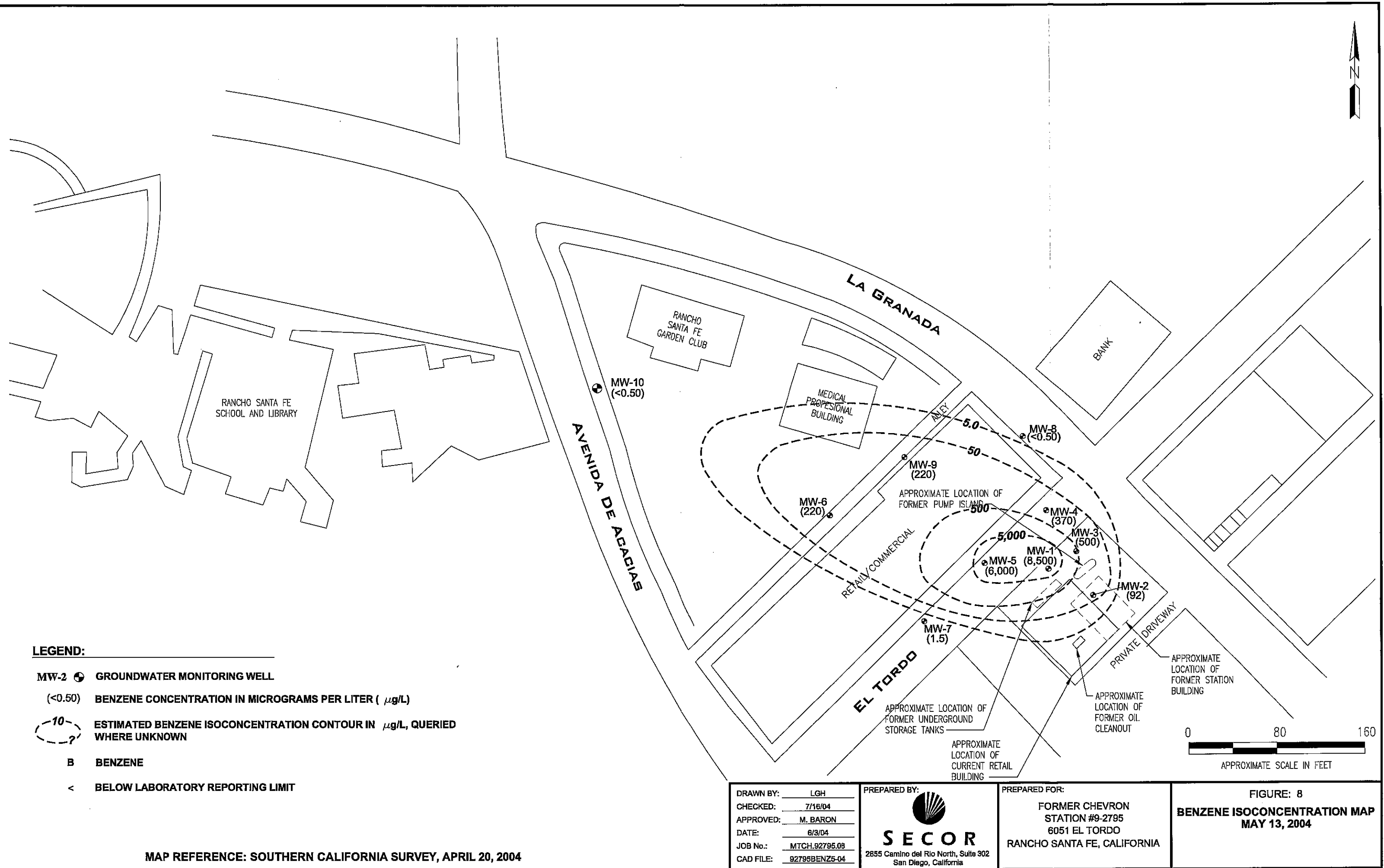
FIGURE: 5
PETROLEUM HYDROCARBON
IN SOIL DISTRIBUTION MAP



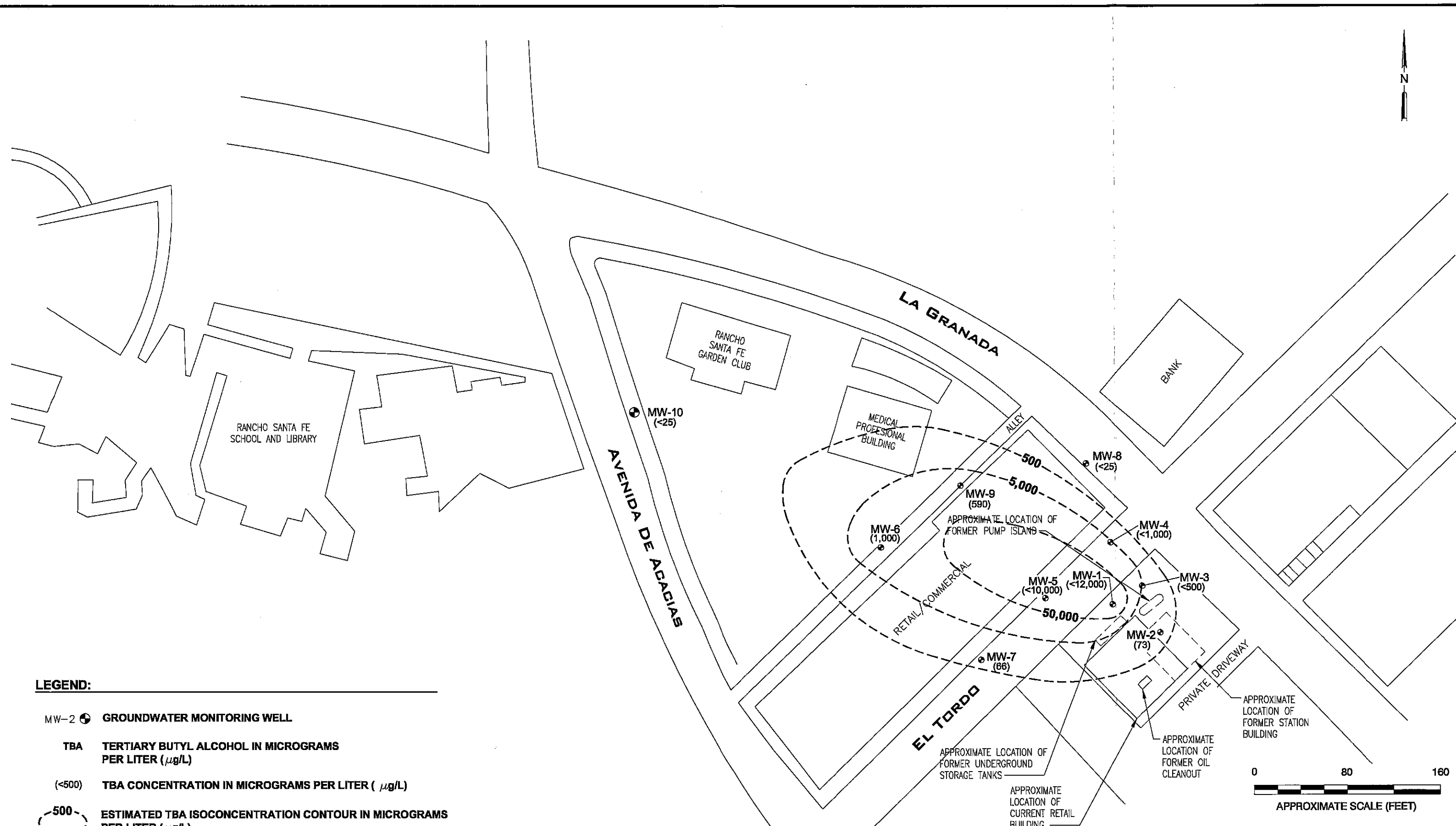
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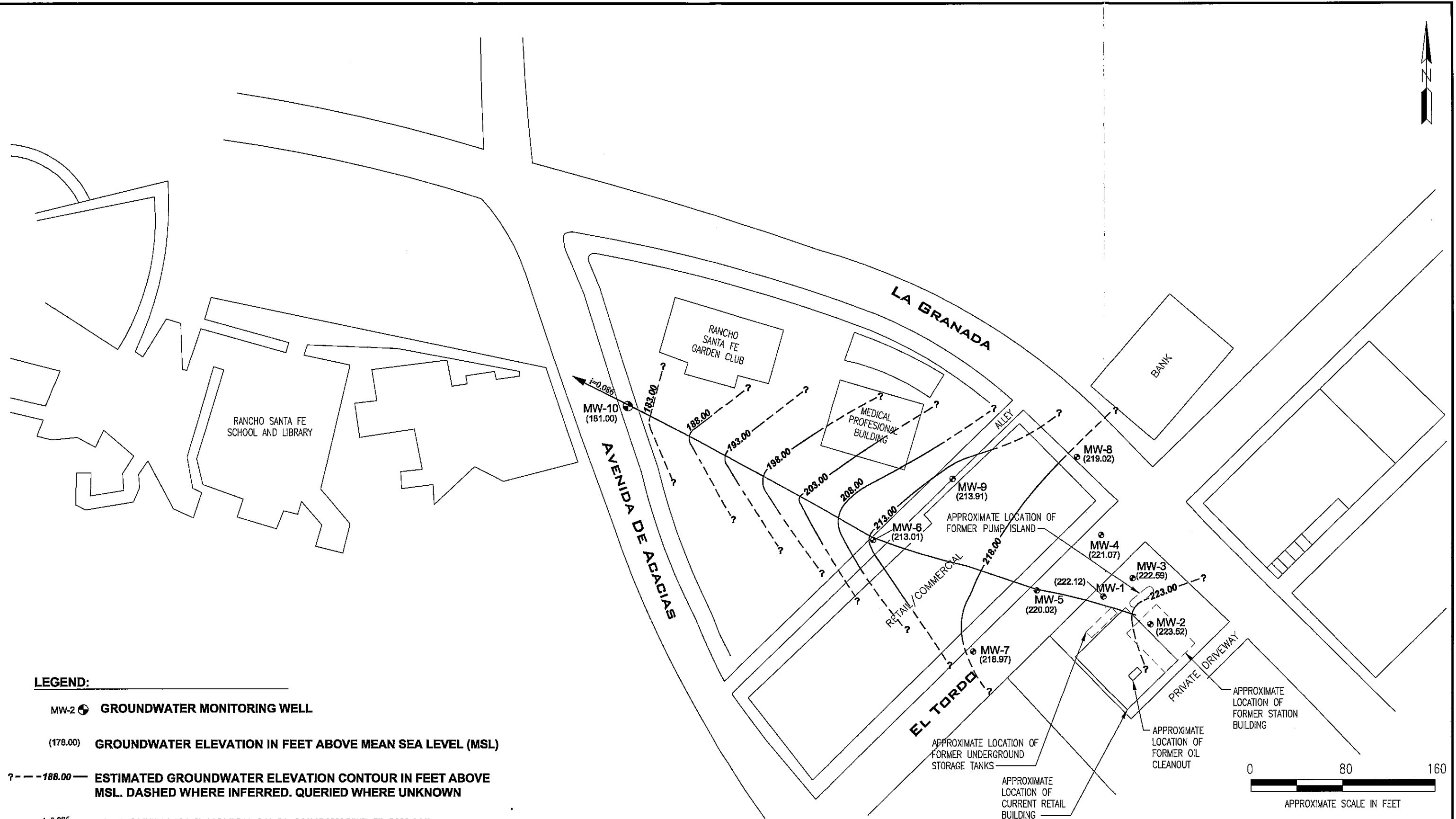


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MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004			
DRAWN BY: LGH CHECKED: APPROVED: DATE: 4/11/05 JOB No.: MTCH.92795.08 CAD FILE: 92795TBA5-04	PREPARED BY: SECOR 2655 Camino del Rio North, Suite 302 San Diego, California	PREPARED FOR: FORMER CHEVRON STATION #9-2795 6051 EL TORDO RANCHO SANTA FE, CALIFORNIA	FIGURE: 9 TBA ISOCONCENTRATION MAP MAY 13, 2004

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


LEGEND:

MW-2  **GROUNDWATER MONITORING WELL**

(178.00) **GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)**

? - - - 188.00 **ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL. DASHED WHERE INFERRED. QUERIED WHERE UNKNOWN**

$i=0.086$  **APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (i)**

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

DRAWN BY: PD
CHECKED: 7/16/04
APPROVED: M. BARON
DATE: 6/3/04
JOB No.: MTCH.92795.08
CAD FILE: 92795GW5-04

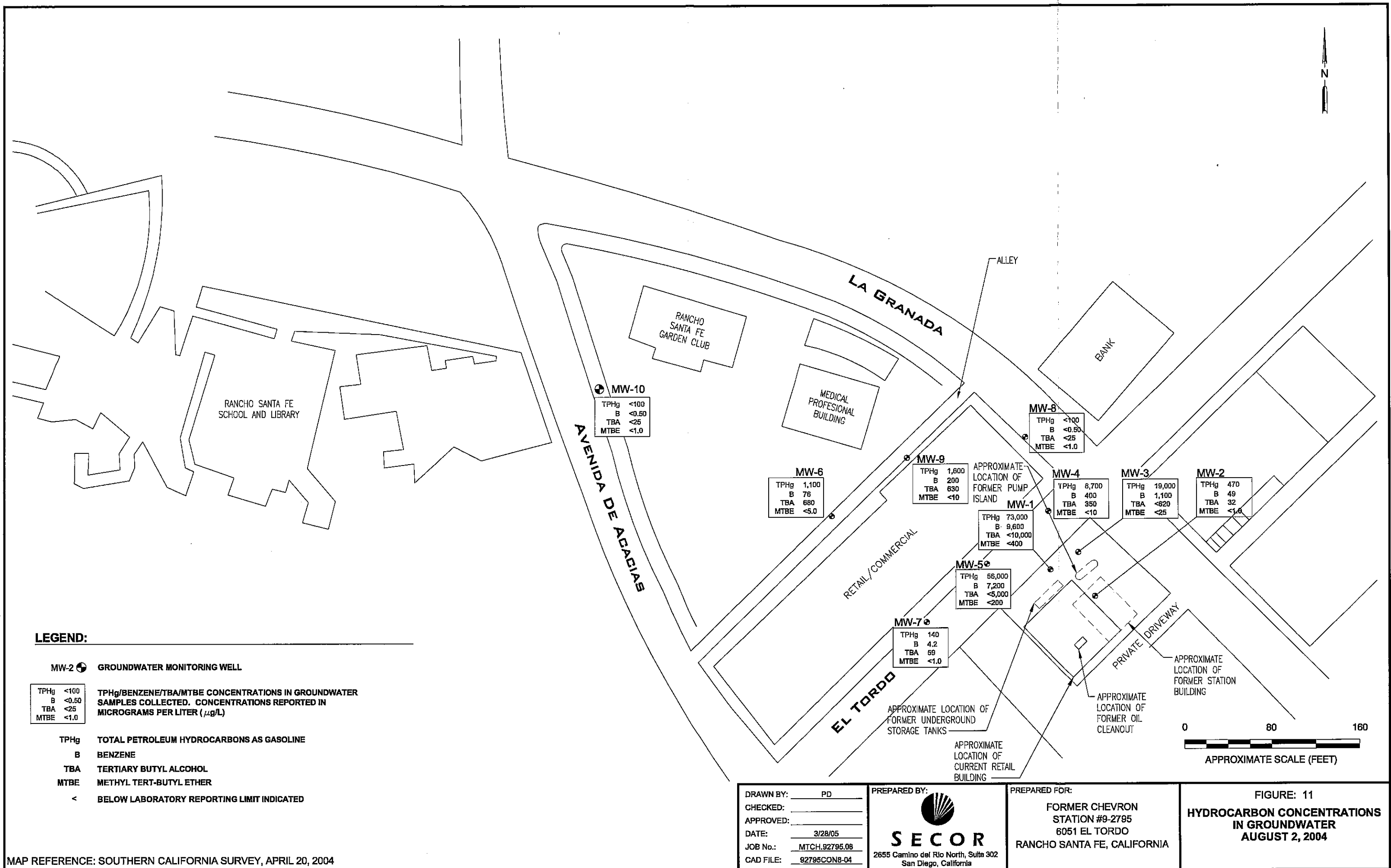
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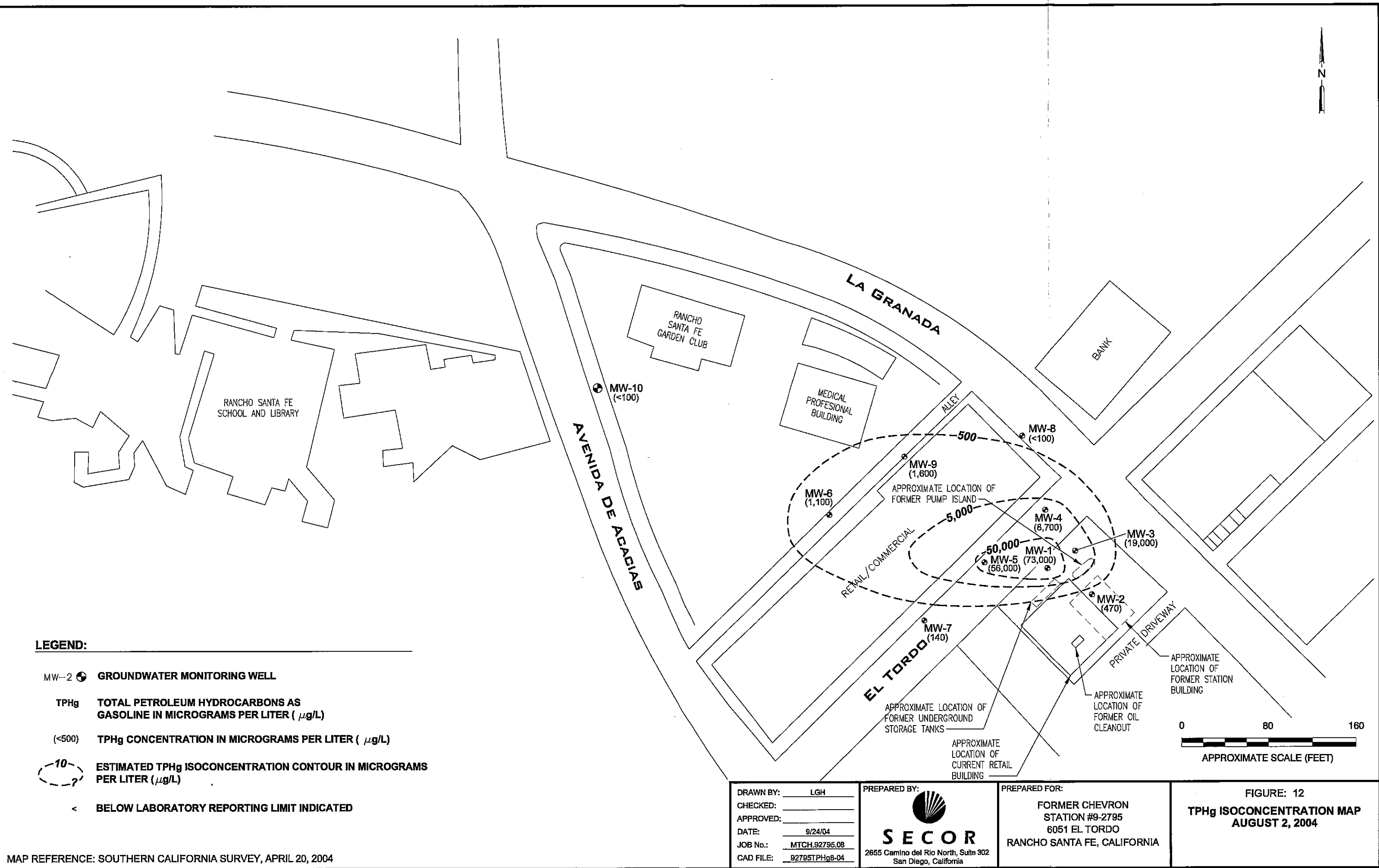
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STATION #9-2795
6051 EL TORDO
RANCHO SANTA FE, CALIFORNIA

FIGURE: 10
GROUNDWATER GRADIENT MAP
MAY 13, 2004

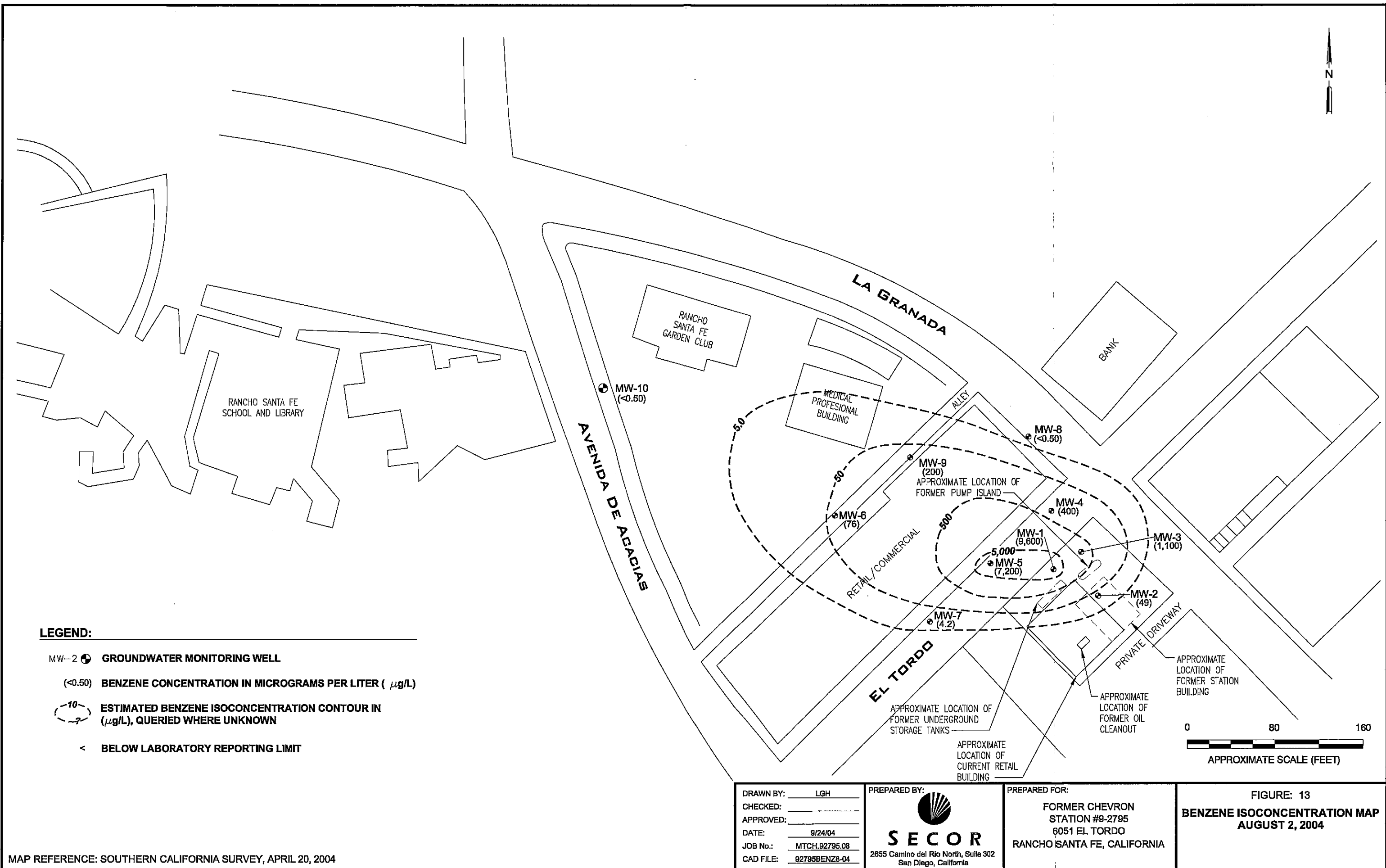
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C:\DRAWING\2795\92795TPH6-04.DWG MODIFIED BY LHUNTER ON APR 11, 2005 - 12:40



C:\DRAWING\2795\92795BENZ8-04.DWG MODIFIED BY LHUNTER ON APR 11, 2005 - 12:40



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APPROVED:
DATE: 9/24/04
JOB No.: MTCH.92795.08
CAD FILE: 92795BENZ8-04

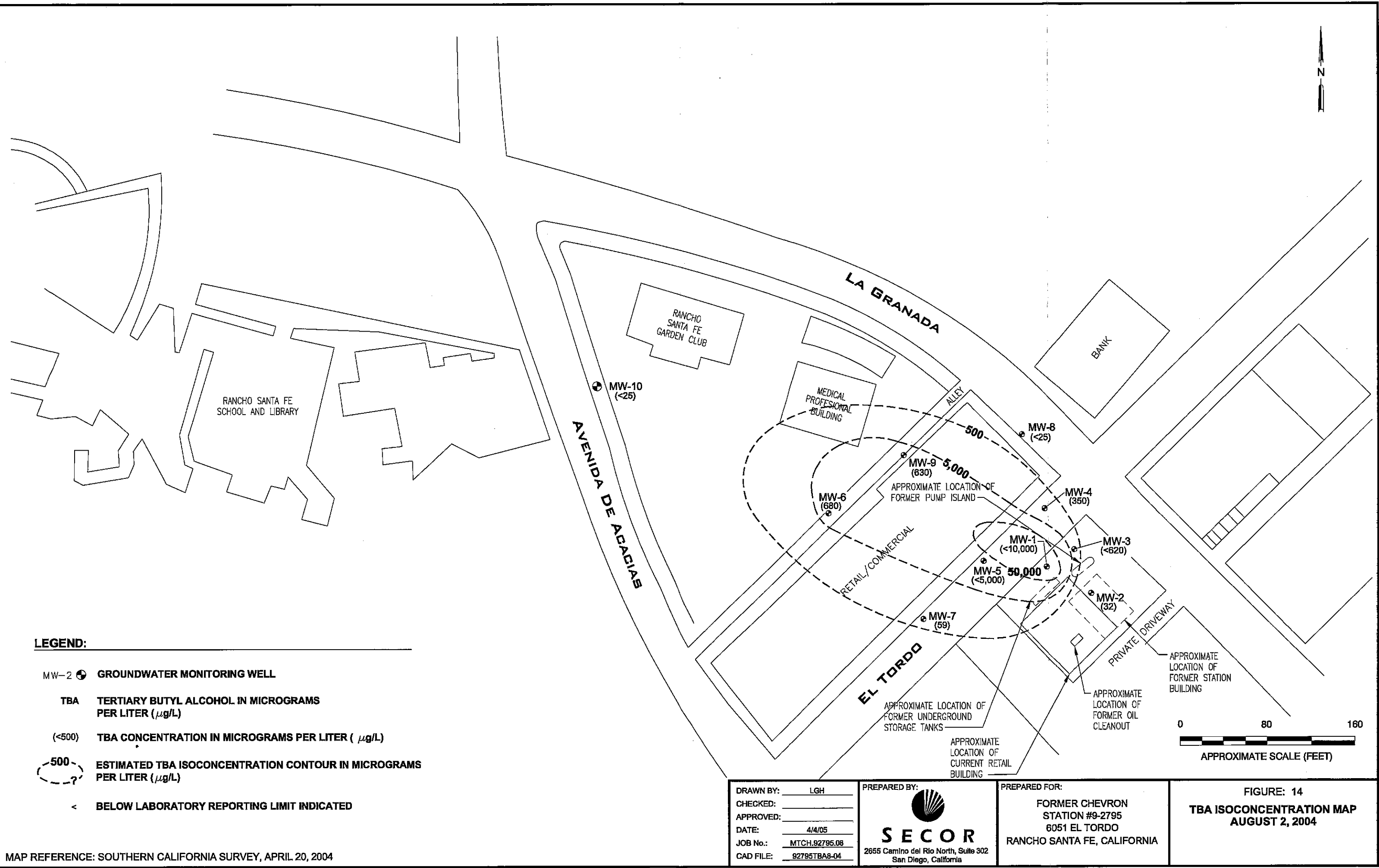
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STATION #9-2795
6051 EL TORDO
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FIGURE: 13
BENZENE ISOCONCENTRATION MAP
AUGUST 2, 2004

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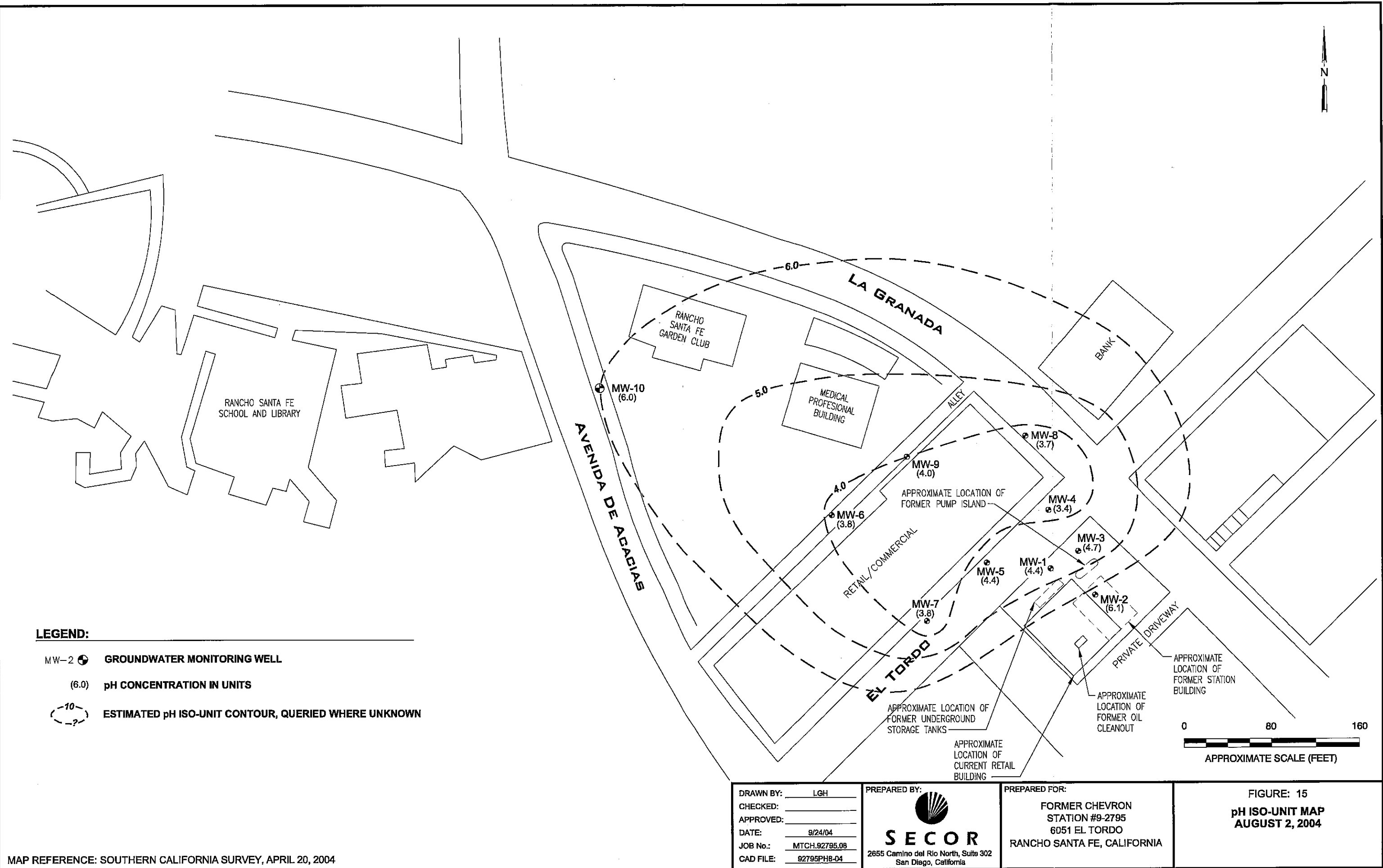
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APPROVED: _____
DATE: 4/4/05
JOB No.: MTCH.92795.08
CAD FILE: 92795TBA8-04

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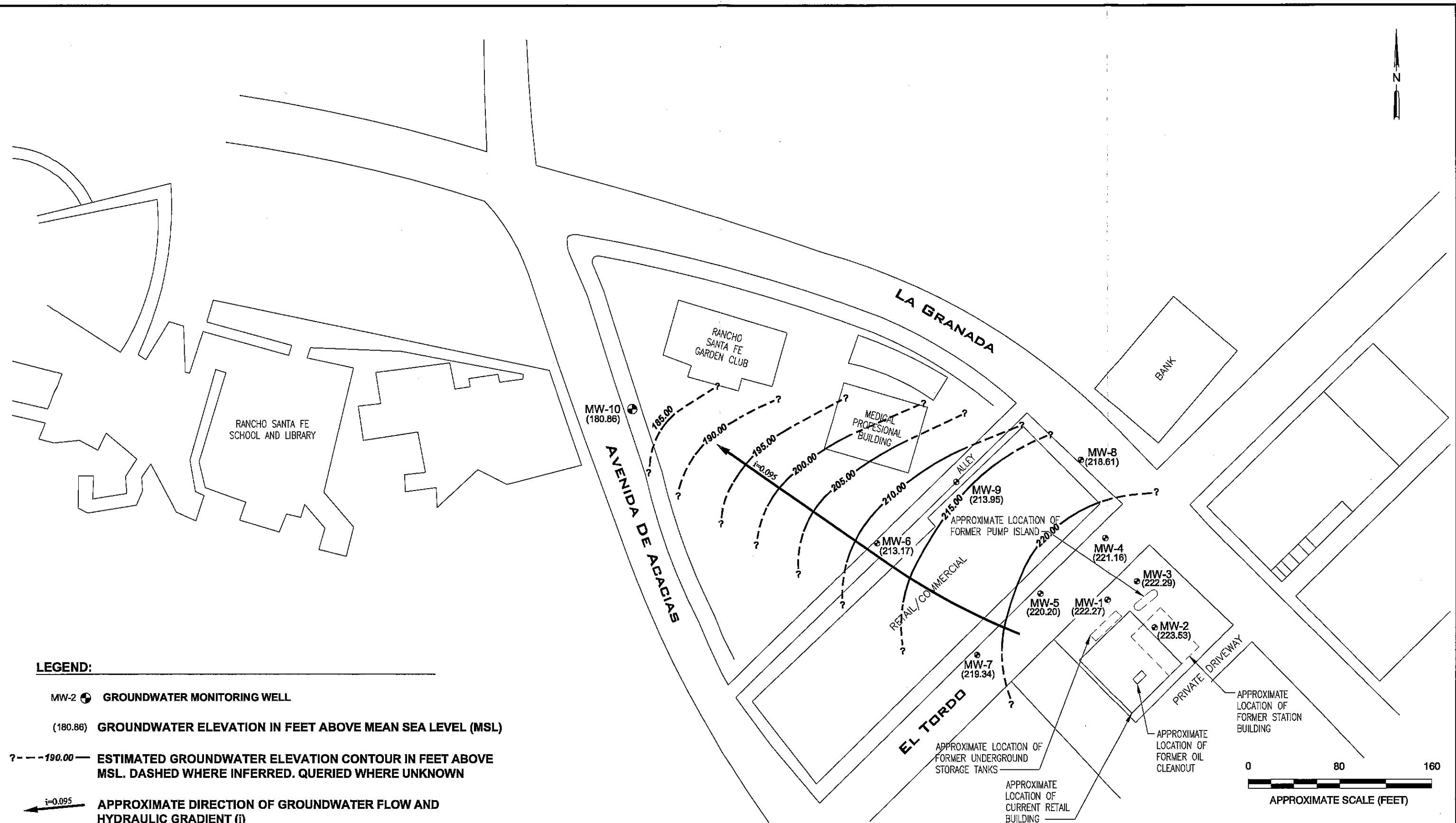
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FIGURE: 14
TBA ISOCONCENTRATION MAP
AUGUST 2, 2004

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LEGEND:

MW-2 GROUNDWATER MONITORING WELL

(180.86) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)

? - - - 190.00 - ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL. DASHED WHERE INFERRED. QUERIED WHERE UNKNOWN

$i=0.095$ APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC GRADIENT (I)

DRAWN BY: PD/LGH
CHECKED: 7/16/04
APPROVED: M. BARON
DATE: 6/3/04
JOB No.: MTCH.92795.08
CAD FILE: 92795GW8-04

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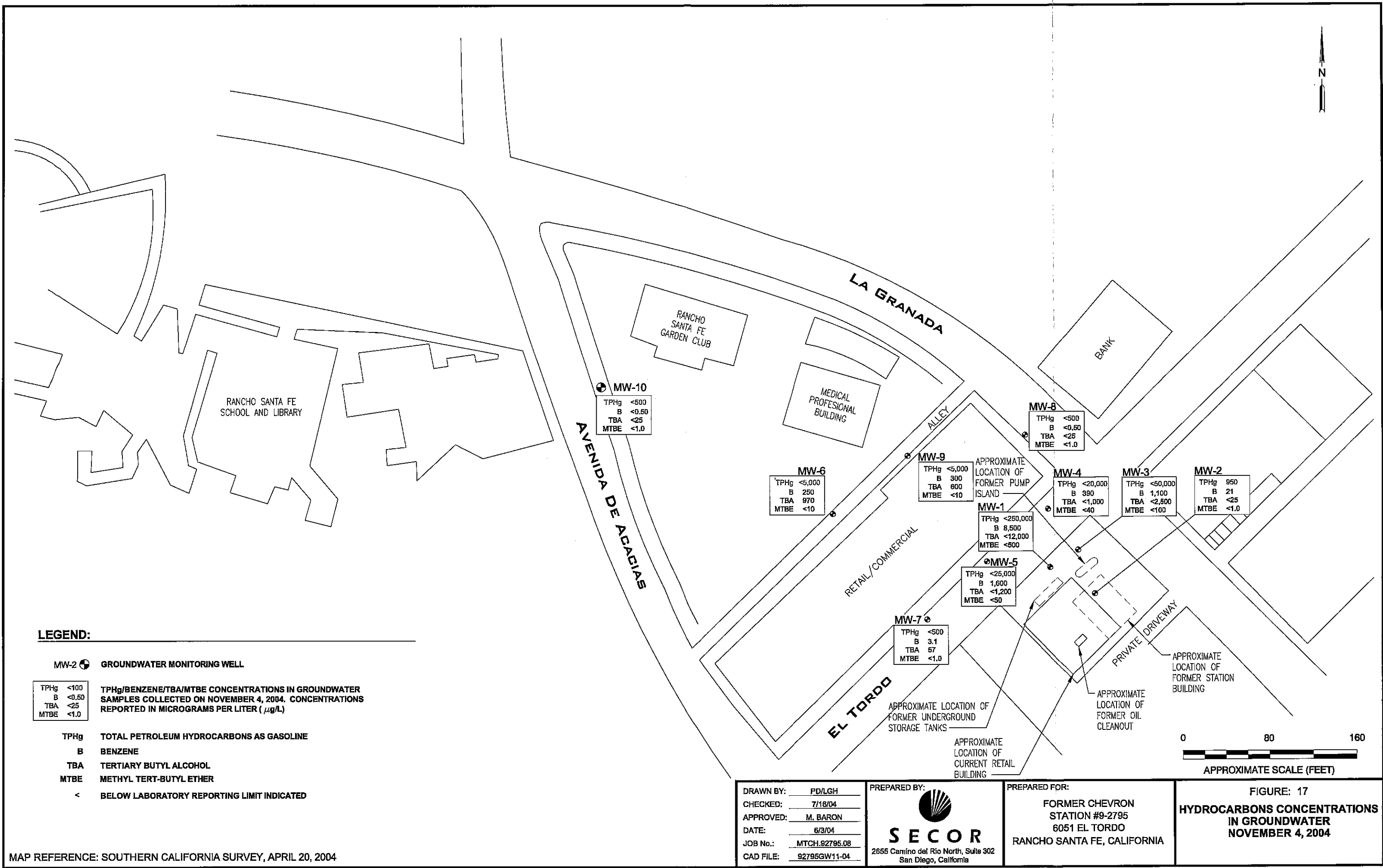
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FORMER CHEVRON
STATION #9-2795
6051 EL TORDO
RANCHO SANTA FE, CALIFORNIA

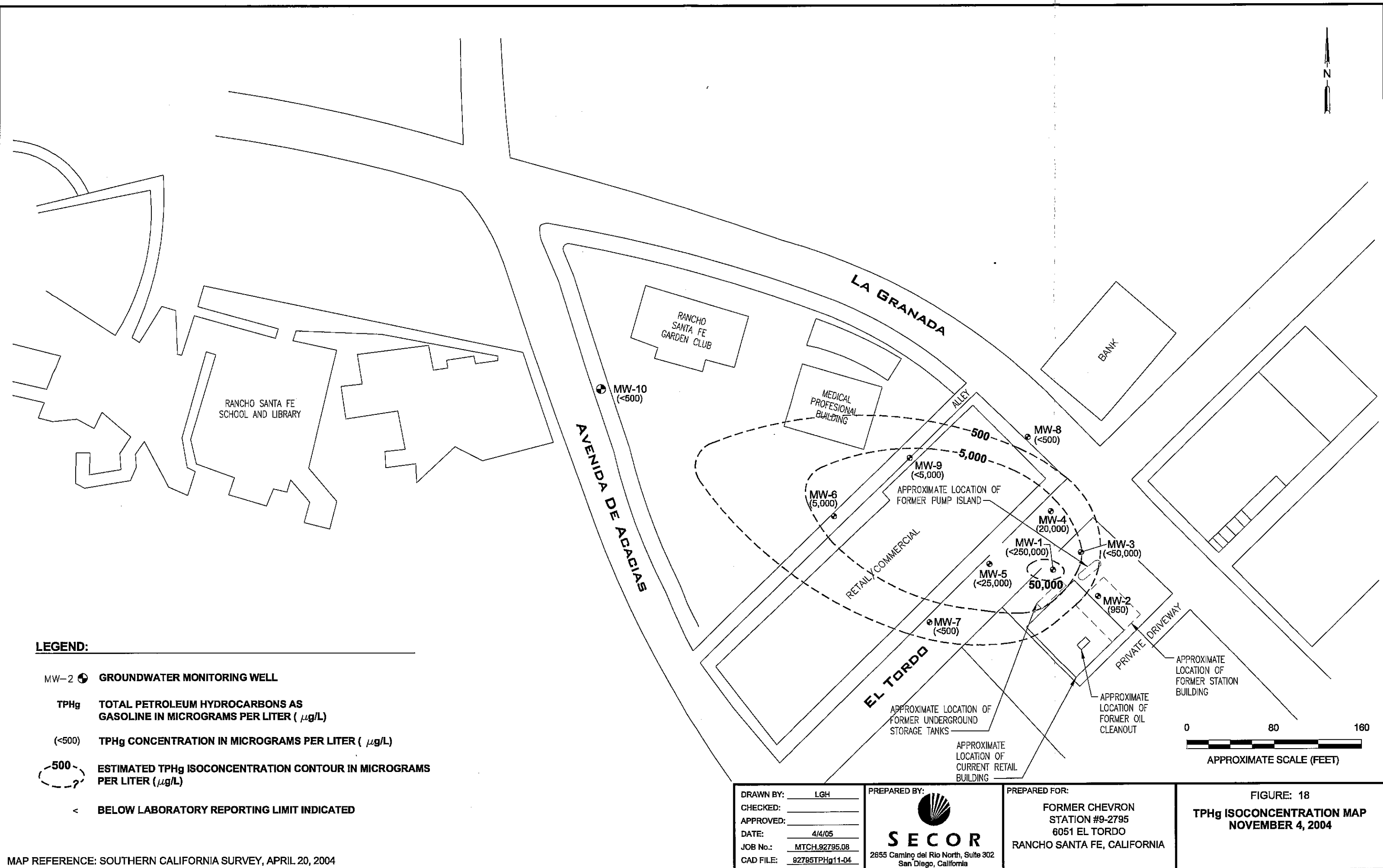
FIGURE: 16
GROUNDWATER GRADIENT MAP
AUGUST 2, 2004

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

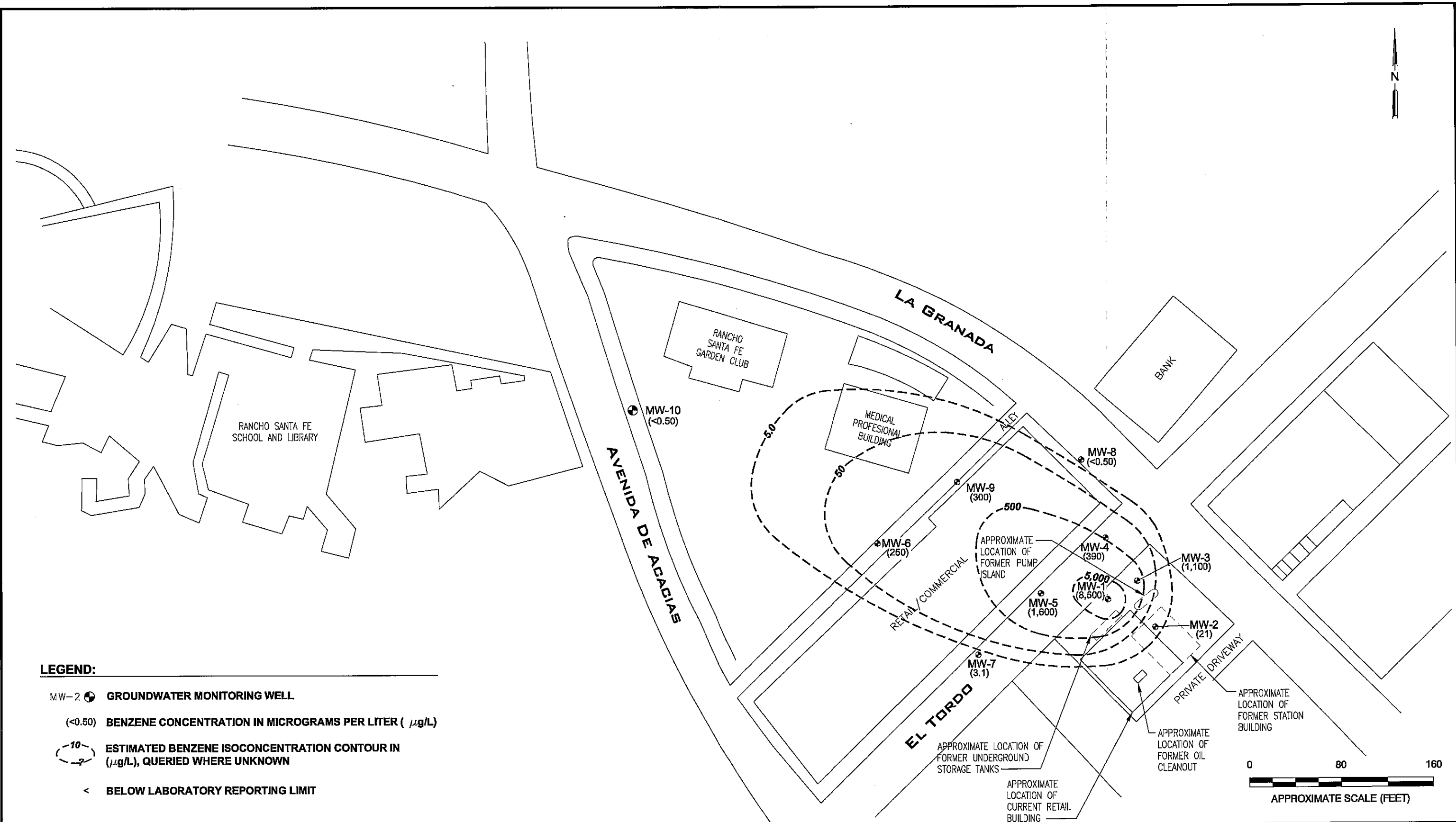
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MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

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DATE: 4/4/05
JOB No.: MTCH.92795.08
CAD FILE: 92795BENZ11-04

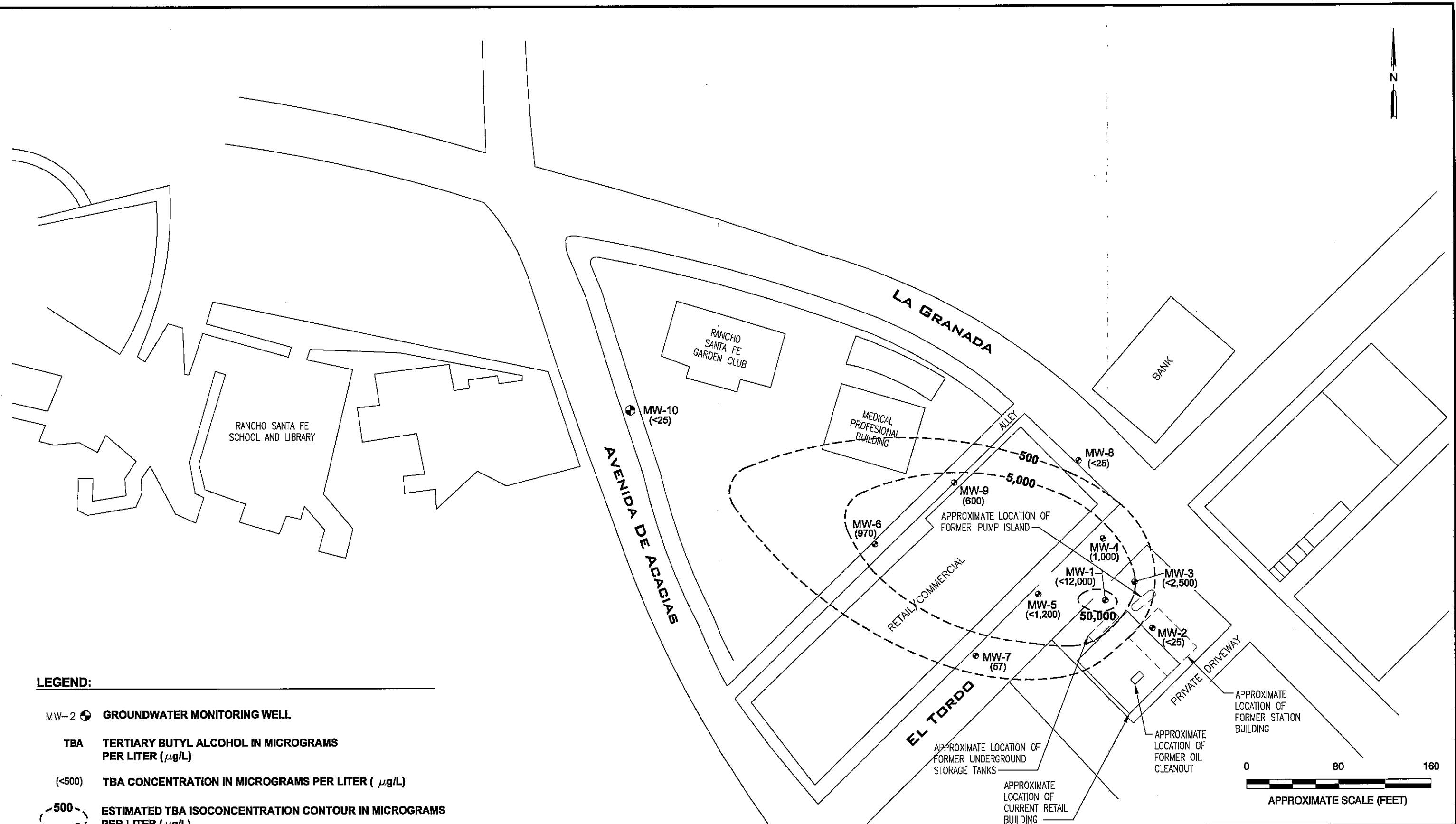
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6051 EL TORDO
RANCHO SANTA FE, CALIFORNIA

FIGURE: 19
BENZENE ISOCONCENTRATION MAP
NOVEMBER 4, 2004

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LEGEND:

MW-2 **GROUNDWATER MONITORING WELL**

TBA TERTIARY BUTYL ALCOHOL IN MICROGRAMS PER LITER (µg/L)

(<500) **TBA CONCENTRATION IN MICROGRAMS PER LITER (µg/L)**

ESTIMATED TBA ISOCONCENTRATION CONTOUR IN MICROGRAMS PER LITER (µg/L)

< **BELOW LABORATORY REPORTING LIMIT INDICATED**

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

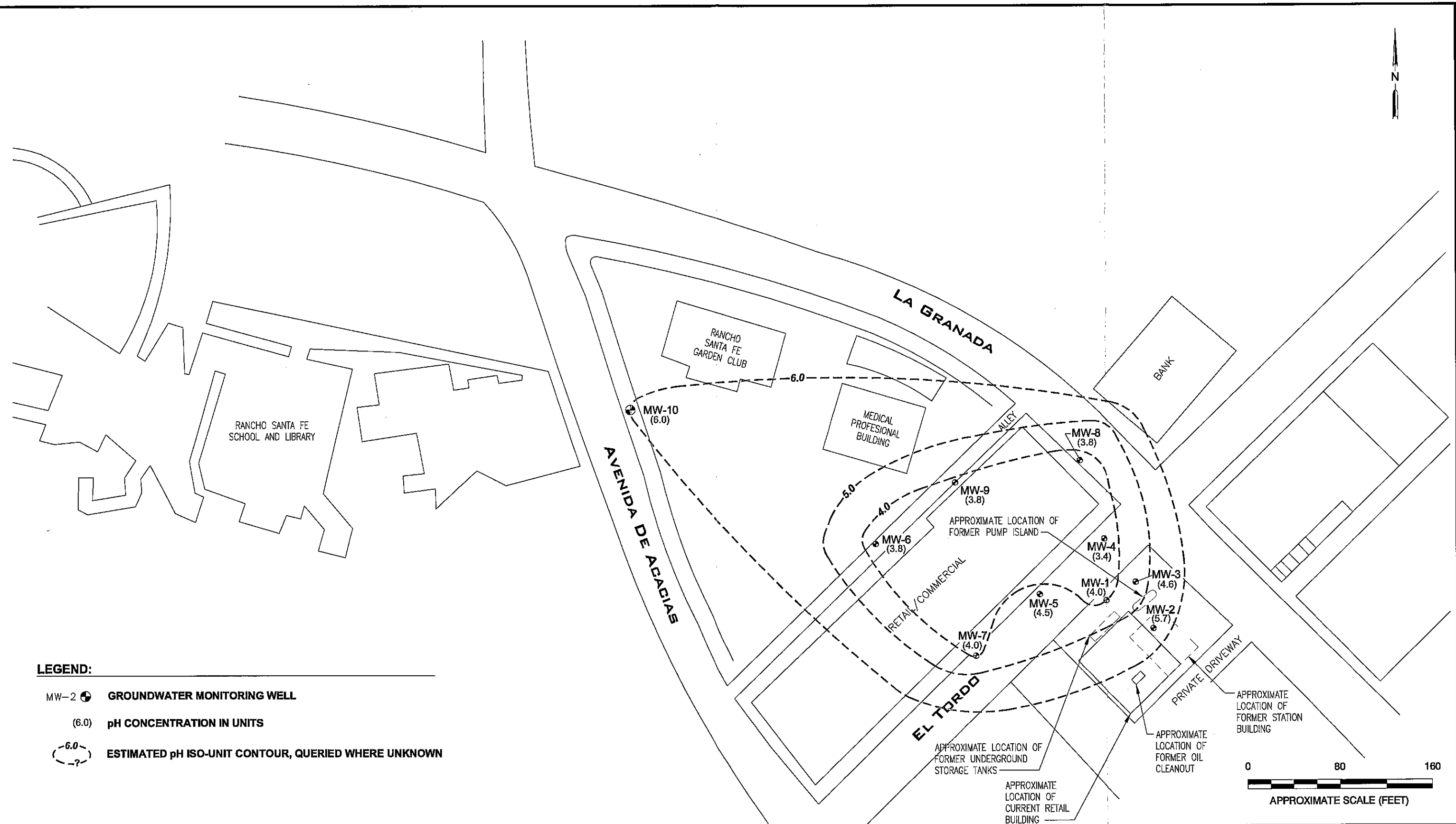
DRAWN BY: LGH
CHECKED: _____
APPROVED: _____
DATE: 4/4/05
JOB No.: MTCH.92795.08
CAD FILE: 92795TBA11-04

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**FORMER CHEVRON
STATION #9-2795
6051 EL TORDO
RANCHO SANTA FE, CALIFORNIA**

**FIGURE: 20
TBA ISOCONCENTRATION MAP
NOVEMBER 4, 2004**

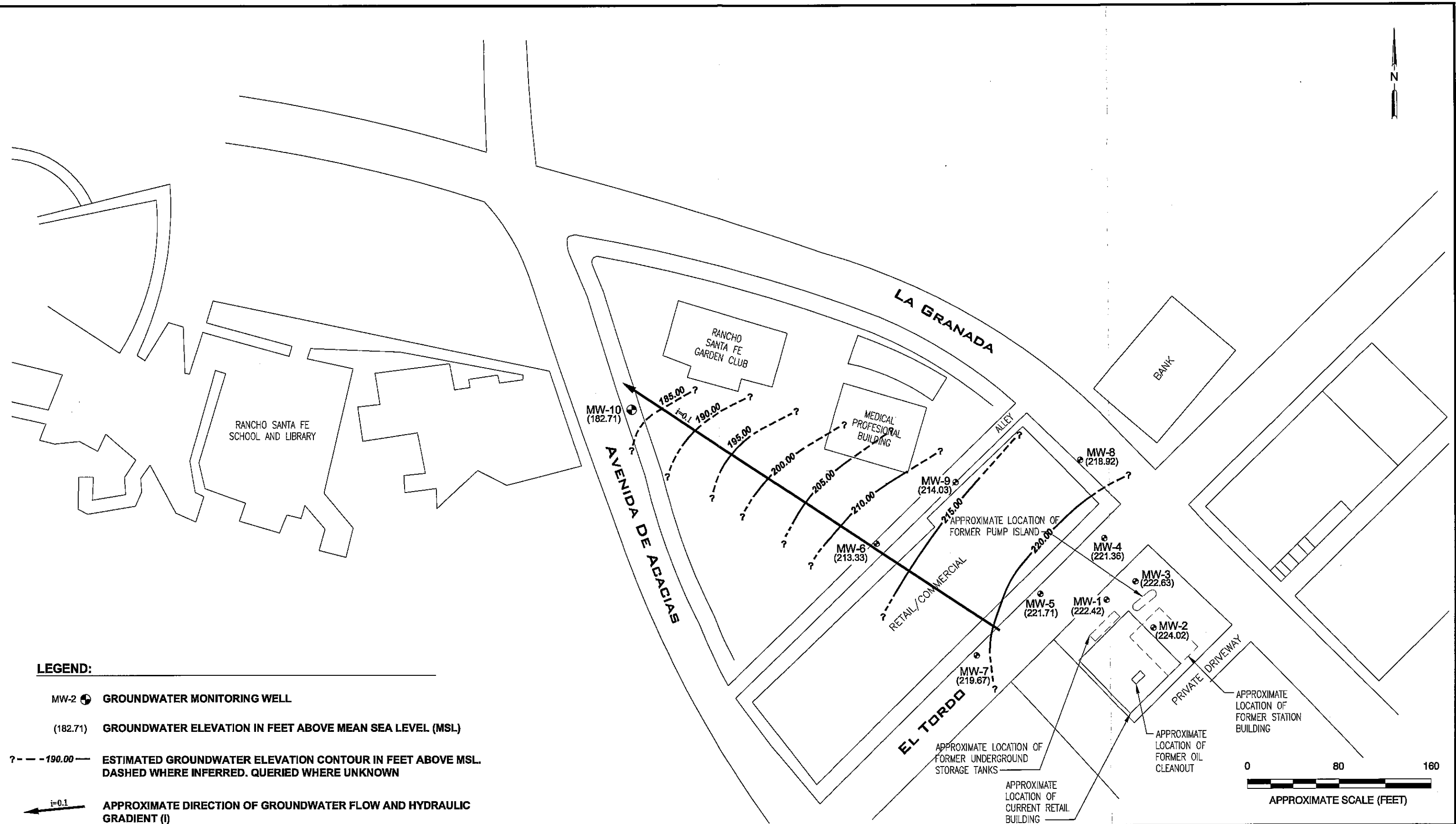
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MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

DRAWN BY: LGH	PREPARED BY:	PREPARED FOR:	FIGURE: 21 pH ISO-UNIT MAP NOVEMBER 4, 2004
CHECKED:		FORMER CHEVRON	
APPROVED:		STATION #9-2795	
DATE: 4/4/05		6051 EL TORO	
JOB No.: MTCH.92795.08	SECOR 2655 Camino del Rio North, Suite 302 San Diego, California	RANCHO SANTA FE, CALIFORNIA	
CAD FILE: 92795PH11-04			

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LEGEND:

MW-2  GROUNDWATER MONITORING WELL

(182.71) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)

? - - 190.00 - - ESTIMATED GROUNDWATER ELEVATION CONTOUR IN FEET ABOVE MSL.
DASHED WHERE INFERRED. QUERIED WHERE UNKNOWN

$i=0.1$  APPROXIMATE DIRECTION OF GROUNDWATER FLOW AND HYDRAULIC
GRADIENT (I)

MAP REFERENCE: SOUTHERN CALIFORNIA SURVEY, APRIL 20, 2004

DRAWN BY: PDL/GH
CHECKED: 7/16/04
APPROVED: M. BARON
DATE: 6/3/04
JOB No.: MTCH.92795.08
CAD FILE: 92795GW11-04

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San Diego, California

PREPARED FOR:
FORMER CHEVRON
STATION #9-2795
6051 EL TORDO
RANCHO SANTA FE, CALIFORNIA

FIGURE: 22
GROUNDWATER GRADIENT MAP
NOVEMBER 4, 2004

APPENDICES

APPENDIX A

Edited Boring Logs and Legend and Select Historical Geologic Cross Sections

PROJECT NO. 08726-06-01				BORING/WELL NO. B 1		WELL CONSTRUCTION	HEADSPACE (PPM)	
DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 2/5/97	WATER LEVEL (ATD)			EQUIPMENT Limited Access Sup. Beaver
				SOIL DESCRIPTION				
1	84	B1-5		Approximately 5 inches asphalt concrete				
2			Very dense, humid, light tan and orange, Silty, fine SAND, trace clay (SM)					
3								
4								
5								
6	49	B1-10						
7								
8								
9								
10			-Becomes dense at 10 feet					
11	>66	B1-15						
12								
13								
14								
15			-Becomes very dense at 15 feet					
16	58	B1-20						
17								
18								
19								
20			BORING TERMINATED AT 20 FEET					
21	-Boring backfilled with bentonite to within 5 inches							
22	and capped with asphalt							
23	-Groundwater not encountered							
24								

Figure A-1, log of Boring B 1

6051E

CASING ELEVATION:
DIAMETER & TYPE OF CASING:
CASING INTERVAL:
WELL SCREEN:
SCREEN INTERVAL:
WELL COVER:
FILTERPACK/INTERVAL:

QUANTITY OF FILTER MATERIAL:
WELL SEAL & INTERVAL:
WELL SEAL QUANTITY:
ANNULUS SEAL/INTERVAL:
ADDITIVES:
WELL DEPTH:
ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLMS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>B 2</u>	WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>2/5/97</u> WATER LEVEL (ATD) _____ EQUIPMENT <u>Limited Access Sup. Beaver</u> DRILLER <u>Pacific</u>		
				SOIL DESCRIPTION		
1				Approximately 5 inches asphalt concrete		
2				Very dense, humid, light tan and reddish-orange, Silty, fine SAND, trace clay (SM)		
3						
4						
5	51	B2-5				
6						
7						
8						
9						
10	68	B2-10				
11						
12						
13						
14						
15	>77	B2-15				
16						
17						
18						
19						
20	42	B2-20		-Becomes dense at 20 feet		
21				BORING TERMINATED AT 20 FEET		
22				-Boring backfilled with bentonite to within 5 inches and capped with asphalt		
23				-Groundwater not encountered		
24						

Figure A-2, log of Boring B 2

6051E

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.




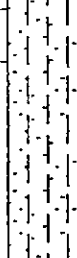
PROJECT NO. 08720-00-01				BORING/WELL NO. <u>B 3</u>		WELL CONSTRUCTION	HEADSPACE (PPM)
DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED <u>2/5/97</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>Limited Access Sup. Beaver</u> DRILLER <u>Pacific</u>			
				SOIL DESCRIPTION			
1	8	B3-5		Approximately 5 inches asphalt concrete			
2				Loose, humid, brown, Silty, fine to medium SAND, trace clay (SM)			
3							
4							
5							
6	47	B3-10					
7							
8							
9							
10				-Becomes dense, tan and coarser grained at 10 feet			
11	>79	B3-15					
12							
13							
14							
15				-Becomes very dense and fine to medium grained at 15 feet			
16	56	B3-20					
17							
18							
19							
20				BORING TERMINATED AT 20 FEET			
21				-Boring backfilled with bentonite to within 5 inches and capped with asphalt			
22				-Groundwater not encountered			
23							
24							

Figure A-3, log of Boring B 3

6051E

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>B 4</u>	WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>2/5/97</u> WATER LEVEL (ATD) _____ EQUIPMENT <u>Limited Access Sup. Beaver</u> DRILLER <u>Pacific</u>		
				SOIL DESCRIPTION		
1				Approximately 5 inches concrete		
2				Medium dense, humid, brown, Silty, fine to coarse SAND, trace of clay and fine gravel (SM)		
3						
4						
5	17	B4-5				
6						
7						
8						
9						
10	11	B4-10				
11						
12						
13						
14						
15	39	B4-15		-Seepage at approximately 15 feet -Becomes dense at 15 feet		
16						
17						
18						
19						
20	>86	B4-20		-Becomes very dense at 20 feet		
21				BORING TERMINATED AT 20 FEET		
22				-Boring backfilled with bentonite to within 5 inches and capped with concrete		
23				-Groundwater not encountered		
24						

Figure A-4, log of Boring B 4

6051E

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>B 5</u>	WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>2/5/97</u> WATER LEVEL (ATD) _____ EQUIPMENT <u>Limited Access Sup. Beaver</u> DRILLER <u>Pacific</u>		
				SOIL DESCRIPTION		
1				Approximately 4 inches concrete		
2				Very dense, humid, tan-orange, Silty, fine to medium SAND, trace of clay (SM)		
3						
4						
5	>58	B5-5				
6						
7						
8						
9				-Pieces of asphalt/concrete in cuttings from 8 to 9 feet		
10	>59	B5-10				
11						
12						
13						
14						
15	>74	B5-15				
16						
17						
18						
19						
20	>54	B5-20		BORING TERMINATED AT 20 FEET		
21				-Boring backfilled with bentonite to within 5 inches		
22				and capped with concrete		
23				-Groundwater not encountered		
24						

Figure A-5, log of Boring B 5

6051E

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. <u>B 6</u>		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED <u>2/5/97</u>	WATER LEVEL (ATD) _____		
				EQUIPMENT <u>HAND AUGER</u>	DRILLER <u>Geocon</u>		
				SOIL DESCRIPTION			
1				Approximately 4 inches concrete			
2	N/A	B6-2		Dry to humid, light tan, Silty, fine to medium SAND, trace of clay and coarse gravel (SM)			
3							
4							
5	N/A	B6-5					
6				BORING TERMINATED AT 8 FEET -Boring backfilled with bentonite to within 5 inches and capped with concrete -Groundwater not encountered			
7							
8	N/A	B6-8					
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							

Figure A-6, log of Boring B 6

6051E

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. B 7		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED	WATER LEVEL (ATD)		
				EQUIPMENT	IR A-300	DRILLER	SDS
				SOIL DESCRIPTION			
1			4.4	APPROXIMATELY 8 INCHES CONCRETE			
2				Dense, humid, tan-brown, Clayey SAND (SC)			
3							
4							
5	49	B7-5 1520		-Becomes light tan and gray at approximately 5 feet			
6							
7							
8							
9							
10	30	B7-10 1539		-Becomes more moist and clayey at approximately 10 feet			
11							
12							
13							
14				-Becomes more sandy and tan-yellow-orange at approximately 14 feet			
15	45	B7-15 1553					
16							
17							
18							
19							
20	51	B7-20 1605		Very dense, moist, tan, fine to medium SAND with some clay (SP)			
21				BORING TERMINATED AT APPROXIMATELY 21 FEET			
22				Boring backfilled with bentonite grout to approximately 6 inches and capped with concrete			
23				Ground water not encountered			
24							

Figure A-1, log of Boring B 7

6051A

CASING ELEVATION:

DIAMETER & TYPE OF CASING:

CASING INTERVAL:

WELL SCREEN:

SCREEN INTERVAL:

WELL COVER:

FILTERPACK/INTERVAL:

QUANTITY OF FILTER MATERIAL:

WELL SEAL & INTERVAL:

WELL SEAL QUANTITY:

ANNULUS SEAL/INTERVAL:

ADDITIVES:

WELL DEPTH:

ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. B 8		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED 4/2/97	WATER LEVEL (ATD)		
				EQUIPMENT IR A-300	DRILLER SDS		
				SOIL DESCRIPTION			
1				APPROXIMATELY 3 INCHES ASPHALT CONCRETE			
2				APPROXIMATELY 8 INCHES COARSE GRAVEL			
3				Moderately dense, humid-damp, brown, Clayey, fine to medium SAND with trace silt (SC)			
4							
5	15	B8-5					
6	18	0733					
7							
8							
9				-Some interbedded, light tan, fine to medium sand from approximately 8 to 17 feet			
10	17	B8-10					
11	82	0803		-Becomes very dense at approximately 11 feet			
12							
13							
14							
15	53	B8-15					
16	>83	0826					
17							
18							
19							
20	15	B8-20		-Becomes moderately dense, damp, brown-gray, and more clayey at approximately 20 feet			
21		0845					
22							
23							
24							

Figure A-2, log of Boring B 8

Continued Next Page

6051A

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. B 8		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED	WATER LEVEL (ATD)		
				EQUIPMENT	IR A-300	DRILLER	SDS
				SOIL DESCRIPTION			
26	43	B8-25 0902		-Becomes dense at approximately 25 feet			
27							
28							
29							
30	68	B8-30 0920		-Becomes very dense and more Clayey at approximately 30 feet			
31							
32							
33							
34							
35	> 85	B8-35 0942					
36				REFUSAL AT APPROXIMATELY 36 FEET			
37				Boring backfilled with bentonite grout to approximately 6 inches and capped with concrete			
38				Groundwater not encountered			
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							

6051A

Figure A-3, log of Boring B 8

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 08726-06-02

DEPTH IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. B 9		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED	WATER LEVEL (ATD)		
				4/2/97	17.0'		
				EQUIPMENT	IR A-300	DRILLER	SDS
				SOIL DESCRIPTION			
1				APPROXIMATELY 4 INCHES ASPHALT CONCRETE			
2				Dense, humid, brown, Clayey, fine to medium SAND (SC)			
3							
4							
5	35	B9-5 1439		-Becomes light brown-gray at approximately 5 feet			
6							
7							
8							
9				-Becomes gray-tan-orange at approximately 9 feet			
10	39	B9-10 1447					
11							
12							
13							
14							
15	57	B9-15 1501		-Becomes very dense and more sandy at approximately 15 feet			
16				Dense, saturated, tan-orange, fine to medium SAND, trace of clay (SP)			
17							
18							
19				-Becomes moist to wet at approximately 19 feet			
20	29	B9-20 1512					
21				BORING TERMINATED AT APPROXIMATELY 21 FEET			
22				Boring backfilled with bentonite grout to within 6 inches and capped with concrete.			
23				Seepage encountered at approximately 17 feet			
24							

Figure A-4, log of Boring B 9

6051A

CASING ELEVATION:	QUANTITY OF FILTER MATERIAL:
DIAMETER & TYPE OF CASING:	WELL SEAL & INTERVAL:
CASING INTERVAL:	WELL SEAL QUANTITY:
WELL SCREEN:	ANNULUS SEAL/INTERVAL:
SCREEN INTERVAL:	ADDITIVES:
WELL COVER:	WELL DEPTH:
FILTERPACK/INTERVAL:	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO.: 60-0348-01

LOCATION: Former Chevron 9-2795

6051 El Tordo

Rancho Santa Fe California, California

DATE DRILLED: June 16, 1998

LOGGED BY: D. Swope

APPROVED BY: G. McCue, RG

DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: CME 75 Hollow Stem Auger SAMPLER TYPE: 2.0-inch Split Spoon Sampler TOTAL DEPTH: 25.0 feet DEPTH TO WATER: 15.8 feet CASING ELEVATION: NA	USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL
					DESCRIPTION			
				0	Surface Material: Concrete. Hand-augered to 5 feet below grade.			Utility box with locking cap
								Cement
				5	Drilled out old well, sandpack and grout.			Bentonite Grout
				10				4" diameter Schedule 40 PVC blank casing
				15				4" diameter Schedule 40 PVC casing 0.020" slotting
				20				
				25				End cap
				30				
				35				
				40				

PROJECT NO. 08726-06-02

DEPTH FEET	PENETRAT. RESIST. BLMS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. MW 2		WELL CONSTRUCTION	HEADSPACE (PPM)
				DATE DRILLED	WATER LEVEL (ATD)		
				4/3/97	19.0'		
				EQUIPMENT	IR A-300	DRILLER	SDS
SOIL DESCRIPTION							
1				APPROXIMATELY 4 INCHES ASPHALT CONCRETE			
2				Dense, humid, brown, Clayey, fine to medium SAND (SC)			
3							
4							
5	30	MW2-5		Very dense, humid, tan, fine to medium SAND (SP)			
6	66	0827					
7							
8							
9							
10	31	MW2-10		Very stiff, humid, brown, Silty CLAY, trace fine sand (CL)			
11	52	0908		-Becomes orangish-gray-brown and more sandy at approximately 11 feet			
12							
14							
15	52	MW2-15		-Becomes, light tan, and more clayey at approximately 15 feet			
16	71	0929					
17							
18							
19							
20	38	MW2-20		Dense, saturated, black, medium SAND (SP)			
21		0952					
22							
23				Dense, moist, brown, Sandy CLAY (SC)			
24							

Figure A-7, log of Boring MW 2

Continued Next Page

6051A

CASING ELEVATION: 239.16 FEET MSL	QUANTITY OF FILTER MATERIAL: 6 BAGS
DIAMETER & TYPE OF CASING: 2" PVC	WELL SEAL & INTERVAL: CONCRETE/0-2 FEET
CASING INTERVAL: 0-15 FEET	WELL SEAL QUANTITY: 3.5 BAGS
SCREEN: 0.020	ANNULUS SEAL/INTERVAL: BENTONITE/2-10 FEET
SCREEN INTERVAL: 15-35	ADDITIVES: N/A
WELL COVER: FLUSH-MOUNT	WELL DEPTH: 35 FEET
FILTERPACK/INTERVAL: #16 SAND/10-36 FEET	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 08726-06-02

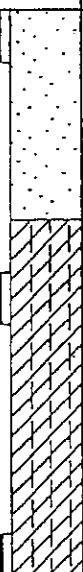
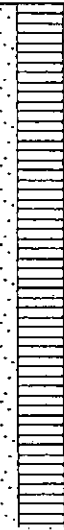
PROJECT NO. 08720-00-02				BORING/WELL NO. MW 2		WELL CONSTRUCTION	HEADSPACE (PPM)
DEPTH FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED	WATER LEVEL (ATD)		
				4/3/97	19.0'		
				EQUIPMENT	IR A-300	DRILLER	SDS
SOIL DESCRIPTION							
26	> 65	MW2-25 1009		-Becomes very dense, humid, and more clayey at approximately 27 feet			
27							
28							
29				Very dense, humid, olive green, Silty CLAY, trace of sand (CL)			
30	69	MW2-30 1032					
31							
32							
33							
34							
35							
36	> 70	MW2-35 1053					
37			BORING TERMINATED AT APPROXIMATELY 36 FEET				
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							

Figure A-8, log of Boring MW 2

6051A

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 08726-06-02

BORING/WELL NO. MW 3					WELL CONSTRUCTION	HEADSPACE (PPM)
DEPTH FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	DATE DRILLED 4/2/97 WATER LEVEL (ATD) 20.0' EQUIPMENT TR A-300 DRILLER SDS		
SOIL DESCRIPTION						
1				APPROXIMATELY 4 INCHES ASPHALT CONCRETE		
2				Moderately dense, humid, tan-brown, Clayey, fine to medium SAND (SC)		
3						
4						
5	22	MW3-5 1049				
6	26					
7						
8						
9						
10	39	MW3-10 1106		-Becomes dense and tan-orange at approximately 10 feet		
11	52			-Becomes very dense at approximately 11 feet		
12						
13						
14				-Becomes damp and more sandy at approximately 14 feet		
15	59	MW3-15 1123				
16	79			-Becomes tan at approximately 16 feet		
17						
18						
19						
20	31	MW3-20 1142		-Becomes dense, saturated, brown-light yellow, and more clayey at approximately 20 feet		
21						
22						
23				-Becomes moist to wet and brown at approximately 23 feet		
24						

Figure A-9, log of Boring MW 3 Continued Next Page 6051A

CASING ELEVATION: 235.58 FEET MSL	QUANTITY OF FILTER MATERIAL: 5 BAGS
DIAMETER & TYPE OF CASING: 2" PVC	WELL SEAL & INTERVAL: CONCRETE 0-2 FEET
CASING INTERVAL: 0-15 FEET	WELL SEAL QUANTITY: 3.5 BAGS BENTONITE
SCREEN: 0.020	ANNULUS SEAL/INTERVAL: BENTONITE/2-10 FEET
SCREEN INTERVAL: 15-30 FEET	ADDITIVES:
WELL COVER: FLUSH-MOUNT	WELL DEPTH: 30 FEET
FILTERPACK/INTERVAL: #16 SAND/10-31 FEET	ENGINEER/GEOLOGIST: ROSS WHITE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO. 08726-06-02


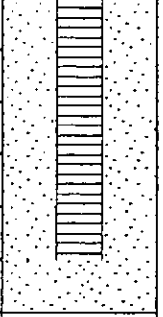
DEF IN FEET	PENETRAT. RESIST. BLWS/FT.	SAMPLE NO.	LITHOLOGY	BORING/WELL NO. MW 3		WELL CONSTRUCTION	HEADSPACE (PPH)
				DATE DRILLED 4/2/97	WATER LEVEL (ATD) 20.0'		
				EQUIPMENT	IR A-300	DRILLER	SDS
				SOIL DESCRIPTION			
26	39	MW3-25 1155					
27							
28							
29							
30	42	MW3-30 1213		BORING TERMINATED AT 31 FEET			
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							
51							
52							
53							
54							

Figure A-10, log of Boring MW 3

6051A

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

PROJECT NO.: 60-0348-01

LOCATION: Former Chevron 9-2795

6051 El Tordo

Rancho Santa Fe California, California

DATE DRILLED: June 16, 1998

LOGGED BY: D. Swope

APPROVED BY: G. McCue, RG

DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: CME 75 Hollow Stem Auger	USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL
					SAMPLER TYPE: 2.0-inch Split Spoon Sampler			
					TOTAL DEPTH: 25.5 feet DEPTH TO WATER: 15 feet			
					CASING ELEVATION: NA			
					DESCRIPTION			
				0	Surface Material: Asphaltic Concrete. Hand-augered to 5 feet below grade.			Utility box with locking cap
					SAND: light brown, dry, fine- to coarse-grained, with some silt and pebbles.	SP		Cement
17/37/50 for 5"	0			5	SILTY SAND: yellowish orange, dense, dry, very fine- to coarse-grained, some gravel.	SM		Bentonite Grout
17/22/30	0			10	SANDY SILT: yellowish orange, medium dense, dry, very fine- to fine-grained sand.			4" diameter Schedule 40 PVC blank casing
50 for 6"	10			15	SAND: light gray and white to yellowish orange, damp, very fine- to medium-grained, some silt.	SW		4" diameter Schedule 40 PVC casing 0.020" slotting
50 for 6"				20	Dense, very fine- to coarse-grained, coarsening.	SM		
					Dense.			
33/50	55			25	Saturated.			End cap
				30				
				35				
				40				



**ALTON
GEOSCIENCE**
San Diego, California

LOG OF EXPLORATORY BORING

MW-4

PAGE 1 OF 1

60-0348 Borings 7/24/98 bla

PROJECT NO.: 60-0348-01

LOCATION: Former Chevron 9-2795

6051 El Tordo

Rancho Santa Fe California, California

DATE DRILLED: June 16, 1998

LOGGED BY: D. Swope

APPROVED BY: G. McCue, RG

DRILLING CO.: West Hazmat

BLOWS PER 6 INCHES	CGI (ppm)	TPH (ppm)	SAMPLE	DEPTH (feet below grade)	DRILLING METHOD: CME 75 Hollow Stem Auger SAMPLER TYPE: 2.0-inch Split Spoon Sampler TOTAL DEPTH: 25.5 feet DEPTH TO WATER: 16.6 feet CASING ELEVATION: NA	USCS	GRAPHIC LOG	WELL CONSTRUCTION DETAIL
DESCRIPTION								
				0	Surface Material: Asphaltic Concrete. Hand-augered to 5 feet below grade.			Utility box with locking cap
4/5/5	0			5	SILTY SAND: yellowish orange (10YR 6/6), damp, very fine- to very coarse-grained, poorly sorted, some pebbles and gravel. Loose, dry, very fine- to medium-grained, some pebbles. Dark brown (7.5 YR 3/4), damp, very fine- to coarse grained.	SM		Cement Bentonite Grout
5/6/8	0			10	Yellowish orange, dry, very fine- to medium-grained.			4" diameter Schedule 40 PVC blank casing
7/9/11	5			15	Dark brown, moist, very fine- to coarse-grained. some pebbles. Yellowish orange, damp to moist, very fine- to medium-grained.			4" diameter Schedule 40 PVC casing 0.020" slotting
50	10				SAND: white, gray, and orange, dense, damp, very fine- to medium-grained, well sorted, clean with few 2, some silt.	SW		
50 for 5"				20	SILTY SAND: yellowish orange (10YR 6/6), damp, very fine- to very coarse-grained, poorly sorted, some pebbles and gravel. Moist.	SM		
					Decreasing silts, hit saturated zone.			
33/50 for 4"	170			25	Hydrocarbon odor.			End cap
				30				
				35				
				40				



**ALTON
GEOSCIENCE**
San Diego, California

LOG OF EXPLORATORY BORING

MW-5

PAGE 1 OF 1

60-0348 Borings 7/24/98 bla

PROJECT NO.: 60-0348-01

LOCATION: Former Chevron 9-2795

6051 El Tordo

Rancho Santa Fe California, California

DATE DRILLED: June 16, 1998

LOGGED BY: D. Swope

APPROVED BY: G. McCue, RG

DRILLING CO.: West Hazmat

DRILLING METHOD: CME 75 Hollow Stem Auger

SAMPLER TYPE: 2.0-inch Split Spoon Sampler

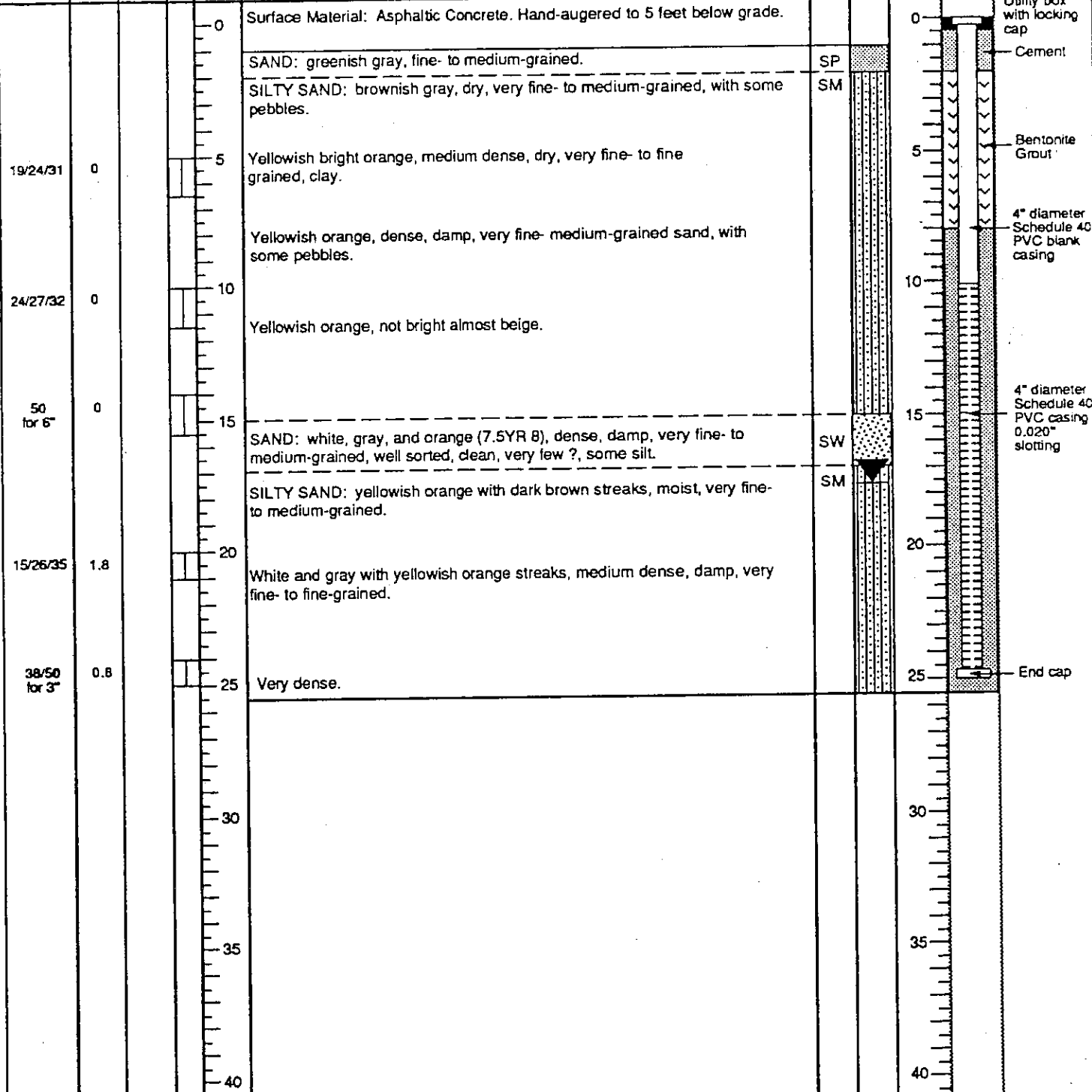
TOTAL DEPTH: 25.5 feet DEPTH TO WATER: 17.4 feet

CASING ELEVATION: NA

DESCRIPTION
















USCS










GRAPHIC LOG

WELL
CONSTRUCTION
DETAIL

LITHOLOGY

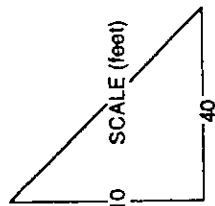
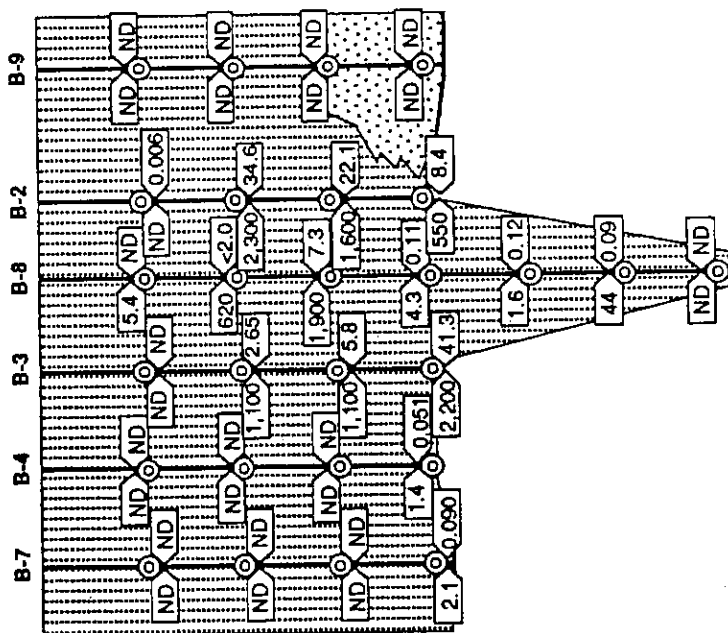
(UNIFIED SOIL CLASSIFICATION SYSTEM)

MAJOR DIVISIONS			TYPICAL NAMES		
COARSE-GRAINED SOILS MORE THAN HALF IS LARGER THAN No. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN No. 4 SIEVE SIZE	CLEAN GRAVELS WITH $\leq 5\%$ FINES	GW		WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES LITTLE OR NO FINES
			GP		POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES
		GRAVELS WITH $\geq 15\%$ FINES	GM		SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
			GC		CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN No. 4 SIEVE SIZE	CLEAN SANDS WITH $\leq 5\%$ FINES	SW		WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
			SP		POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH $\geq 15\%$ FINES	SM		SILTY SANDS, SAND-SILT MIXTURES
			SC		CLAYEY SANDS, SAND-CLAY MIXTURES
FINE-GRAINED SOILS MORE THAN HALF IS SMALLER THAN No. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT LESS THAN 50		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
			CL		INORGANIC CLAYS OF LOW- TO MEDIUM-PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
			OL		ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC CLAYS OF MEDIUM- TO HIGH-PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS			PI		PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

SYMBOLS	NOTES
 SAMPLE INTERVAL  SAMPLE NOT RECOVERED  GROUND WATER LEVEL ENCOUNTERED DURING DRILLING  STATIC GROUND WATER LEVEL MEASURED IN WELL  CONCRETE  ASPHALTIC CONCRETE  BENTONITE GROUT  BENTONITE CHIPS  No. 3 MONTEREY SAND or MEDIUM AQUARIUM SAND	B = benzene CGI = combustible gas indicator E = ethylbenzene fbg = feet below grade LEL = lower explosive limit MSL = mean sea level ND = below detection limits stated in official Laboratory Reports PID = photoionization detector ppb = parts per billion ($\mu\text{g/kg}$) ppm = parts per million (mg/kg) T = toluene TPH = total petroleum hydrocarbons TPH - G = total petroleum hydrocarbons as gasoline TPH - D = total petroleum hydrocarbons as diesel TRPH = total recoverable petroleum hydrocarbons X = total xylenes

B WEST
B' EAST

DEPTH (feet)
0
5
10
15
20
25
30
35
40



Vertical Exaggeration = 4x

NOTES:

TPHg = total petroleum hydrocarbons as gasoline; B= benzene; mg/kg = milligrams per kilogram; ND = below detection limits stated in official Laboratory Reports. Well width dimensions are not to scale.

LEGEND

Soil Sample with TPHg and Benzene Concentrations (mg/kg)

Total Boring Depth

SILTY SAND

Well Sorted SAND


CROSS-SECTION B-B'

Former Chevron 9-2795

6051 El Tordo

Rancho Santa Fe, California

FIGURE 7

SECOR				BOREHOLE / WELL LOG				Number: MW-7		
				Client: CHEVRON USA			Job No: 008.52795		Sheet: 1 of 1	
				Location: Chevron Station No. 9-2795 6051 El Tordo Rancho Santa Fe, CA			Drilling Company/Driller: West Hazmat Drilling / Rick Hastings, Mike Barrow			
SECOR Rep: R. Reyes		Approved by: 		Drill Rig/Sampling Method: CME-75 / Split Spoon				Borehole Dia.: 8"		
Date Started: 10/24/01		Date Finished: 10/24/01						Casing Dia.: 2"		
								Surface Elevation: N/A		

SAMPLE LOG				BOREHOLE LOG				WELL LOG
Sample Number	OVA/PID (ppm)	Lab Results TPHg(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)	Well Design
				0			4" Asphalt Surface	
				1	SM		Silty SAND, orangish-brown (2.5Y 7/7), fine to medium grained sand, subangular-subrounded, very slightly moist, dense, friable, no visible staining, no hydrocarbon (HC) odor.	
			2					
			3					
			4					
MW-7/5'	0		26/52	5	SM		Silty SAND, gray to yellowish gray (2.5Y 8/3), fine to medium grained sand, subangular to subrounded, highly indurated, slightly moist, dense, no visible staining, no HC odor.	
			6					
			7					
			8					
MW-7/10'	0		17/17/26	10	CL		Silty CLAY, brown to yellowish brown, (2.5Y 6/5), slightly moist, dense, no visible staining, no HC odor.	
			11					
			12					
			13					
MW-7/15'	0.4	ND	50 for 6"	15	SM		Silty SAND, light tan to gray and olive gray (5Y 7/3), sand grains subangular to subrounded, minor amount of silt, moist, dense, friable, no visible staining, no HC odor.	
			16					
			17					
			18					
MW-7/20'	0.2		36/50	20	SM		Silty SAND, orangish-brown (2.5Y 7/7), sand grains subangular to subrounded, minor amount of clay, moist, friable, no visible staining, no HC odor.	
			21					
			22					
			23					
MW-7/25'	0.3	ND	34/50	25	SM		Silty SAND, gray to light gray (2.5Y 7/2), subangular to subrounded sand grains, minor amount of clay, moist, dense, friable, no visible staining, no HC odor.	
			26					
			27					
			28					
MW-7/28'	0	ND	27/50	29	CL		Silty CLAY, mottled yellowish gray and orange (5Y 6/7), moist, dense, friable, no visible staining, no HC odor.	
				30				
TOTAL DEPTH AT 28 FEET BGS								

SECOR

BOREHOLE / WELL LOG

Number: MW-8

Client: CHEVRON USA

Job No: 008.52795

Sheet: 1 of 1

Location: Chevron Station No. 9-2795
6051 El Tordo
Rancho Santa Fe, CA

Drilling Company/Driller:
West Hazmat Drilling /
Rick Hastings, Mike Barrow

SECOR Rep:
R. Reyes

Approved by:
CR Ballale

Date Started:
10/24/01

Date Finished:
10/24/01

Drill Rig/Sampling Method:
CME-75 / Split Spoon

Borehole Dia.: 8"
Casing Dia.: 2"
Surface Elevation: N/A

SAMPLE LOG				BOREHOLE LOG				WELL LOG
Sample Number	OVA/PID (ppm)	Lab Results TPHg(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)	Well Design
				0			4" Asphalt Surface	
				1	SM		Silty SAND, orangish-brown (2.5Y 7/7), fine to medium grained sand, subangular to subrounded, minor amount of clay, very slightly moist, friable, no HC odor.	
				2				
				3				
				4				
MW-8/5'	0		14/16/21	5	CL		Silty CLAY, brown to orangish-brown, mottled with orange color, very slightly moist, stiff, no visible staining, no HC odor.	
				6				
				7				
				8				
MW-8/10'	0		36/50	10	SM		Silty SAND, light gray to yellowish gray (2.5Y 6/6), fine, subangular to subrounded sand grains, very slightly moist, moderately indurated but friable, no visible staining, no HC odor.	
				1				
				2				
				3				
MW-8/15'	0.1	ND	50 for 6"	15	SM		Silty SAND, light gray to yellowish gray (2.5Y 8/3), fine, subangular to subrounded sand grains, moist, moderately indurated but friable, no visible staining, no HC odor.	
				6				
				7				
				8				
MW-8/20'	0		41/50	20	SM		Silty SAND, light gray to yellowish gray (10Y 8/1), fine, subangular to subrounded sand grains, moist, moderately indurated but friable, no visible staining, no HC odor.	
				1				
				2				
				3				
MW-8/25'	0	ND	36/50	25	SM		Silty SAND, tan to orangish tan (5Y 7/3), subangular to subrounded, fine to medium grained sand, moist, no visible staining, no HC odor.	
				6				
				7				
				8				
MW-8/28'	0	ND	32/50	8	SM		Silty SAND, tan to orangish tan (2.5Y 5/4), subangular to subrounded, fine to medium grained sand, wet, no visible staining, no HC odor.	
				9				
				30			TOTAL DEPTH AT 28 FEET BGS	

<h1 style="margin: 0;">SECOR</h1>				BOREHOLE / WELL LOG				Number: MW-9	
SECOR Rep: R. Reyes		Approved by: 		Client: CHEVRON USA		Job No: 008.52795		Sheet: 1 of 1	
Date Started: 10/24/01				Date Finished: 10/24/01		Drill Rig/Sampling Method: CME-75 / Split Spoon		Drilling Company/Driller: West Hazmat Drilling / Rick Hastings, Mike Barrow	
Borehole Dia.: 8"		Casing Dia.: 2"		Surface Elevation: N/A					
SAMPLE LOG				BOREHOLE LOG					WELL LOG
Sample Number	OVA/PID (ppm)	Lab Results (TPHg(ppm))	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)		Well Design
				0			4" Asphalt Surface		
				1	ML		FILL MATERIAL (?) Clayey SILT, grayish brown to orangish brown (10YR 5/6), slightly moist, soft, friable, no visible staining, no HC odor.		
			2						
			3						
			4						
MW-9/5'	0		3/4/5	5	ML		Clayey SILT, grayish brown to orangish brown (10YR 5/6), slightly moist, soft, friable, no visible staining, no HC odor.		
			6						
			7						
			8						
				9	ML				
			10						
			11						
			12						
MW-9/10'	0		36/50	13	SM		Silty SAND, gray to orangish gray (5Y 8/2), fine to medium grained sand, minor amount of clay, moderately indurated, very slightly moist, no visible staining, no HC odor.		
			14						
			15						
			16						
				17	SC		Clayey SAND, gray to orangish gray (5Y 7/3), fine subangular to subrounded grained sand, moderately indurated, moist, dense, no visible staining, sample is mottled displaying orange color sediments, no HC odor.		
			18						
			19						
			20						
MW-9/15'	0.2	ND	15 for 6"	21	SC				
			22						
			23						
			24						
MW-9/20'	0.1		25/30/36	25	ML		Clayey SILT, gray to olive mottled with orange (5Y 6/3), minor amount of fine grained sand, subangular to subrounded, slightly moist, dense, no visible staining, no HC odor.		
			26						
			27						
			28						
				29	ML				
			30						
			31						
			32						
MW-9/25'	0.1	ND	50 for 6'	33	SM		Silty SAND, light gray to olive gray (2.5Y 7/2), sand if fine to medium grained, slightly moist, dense, friable, no visible staining, no HC odor.		
			34						
			35						
			36						
				37	SM				
			38						
			39						
			40						
MW-9/28'	0	ND	35/50	41	CL		Silty CLAY, mottled yellowish gray and orange (5Y 7/3), moist, dense, friable, no visible staining, no HC odor.		
			42						
			43						
			44						
TOTAL DEPTH AT 28 FEET BGS									

SECOR

BOREHOLE / WELL LOG

Number:

MW-10

Client:

Chevron Texaco

Job No:

MTCH.92795.08

Sheet:

1 of 2

Location:

Chevron Service Station #9-2795
6051 El Tordo
Rancho Santa Fe, California

Drilling Company/Driller:

West Hazmat

SECOR Rep:

BL/RT

Approved by:

Date Started:

4/13/04

Date Finished:

4/13/04

Drill Rig/Sampling Method:

CME-75/ CA Split Spoon Sampler

Borehole Dia.:

8"

Casing Dia.:

2"

Surface Elevation:







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SAMPLE LOG

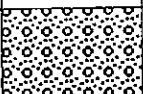
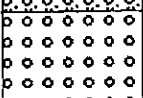
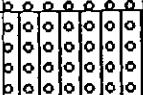
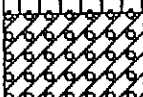
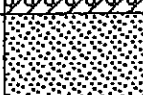










BOREHOLE LOG

WELL LOG

Sample Number	OVA/PID (ppm)	Lab Results TPH(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)	Well Design
				0			3" Concrete	
				1	ML		Silt with SAND, loose, gray with orange mottling, mostly silt, little fine-grained sand, moist, no hydrocarbon (HC) odor	
				2				
				3				
				4	SM		Silty SAND, loose, yellow (5Y 7/6), mostly fine to medium grained sand, little silt, moist, no HC odor	
MW-10/5'	--	--	--	5				
				6				
				7				
				8	SW		Well graded SAND, dense, white (5Y 8/1), mostly fine to coarse grained sand, little silt, moist, red (2.5YR 4/6) stringers, no HC odor	
MW-10/10'	1.9	--	25	9				
				10			Well graded SAND, dense, olive yellow (5Y 6/6), mostly fine to coarse grained sand, little silt, damp, no HC odor	
				11				
				12				
				13				
MW-10/15'	0.0	--	13	14	ML		Silt with SAND, stiff, light olive gray (5Y 6/2), mostly silt, some fine grained sand, moist, orange mottling, no HC odor	
				15				
				16				
				17				
				18				
MW-10/20'	0.0	--	15	19			SILT, medium stiff, light olive gray (5Y 4/2), mostly silt, dry, no HC odor	
				20				
				21				
				22				
				23				
MW-10/25'	0.0	--	8	24			SILT, stiff, light olive gray (5Y 5/2), mostly silt, dry, no HC odor	
				25				
				26				
				27				
				28				
				29				
MW-10/30'	0.0	--	18	30	SW		Well graded SAND, loose, light olive brown (5Y 4/3), mostly sand, little silt, dry, no HC odor	

SECOR				BOREHOLE / WELL LOG				Number: MW-10		
				Client: Chevron Texaco			Job No: MTCH.92795.08		Sheet: 2 of 2	
				Location: Chevron Service Station #9-2795 6051 El Tordo Rancho Santa Fe, California			Drilling Company/Driller: West Hazmat			
SECOR Rep: BL/ RT		Approved by:								
Date Started: 4/13/04		Date Finished: 4/13/04		Drill Rig/Sampling Method: CME-75/ CA Split Spoon Sampler				Borehole Dia.: 8"	Casing Dia.: 2"	Surface Elevation: --
SAMPLE LOG				BOREHOLE LOG						WELL LOG
Sample Number	OVA/PID (ppm)	Lab Results TPH(ppm)	Density Blows/ft	Depth in Feet	USCS Symbol	Graphic Log	Geologic Description (Soil Type, Color, grain, minor soil component, moisture, density, odor, etc.)			Well Design
MW-10/30'	0.0	--	18	30 X 1 X 2 3 4	SW					
MW-10/35'	0.0	--	46	35 X 6 X 7 8 9	SM		Silty SAND, medium dense, medium brown (5Y 4/4), mostly sand, little silt, moist, no HC odor			
MW-10/40'	0.0	--	19	40 X 1 X 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60	ML		Silt with SAND, stiff, light olive gray (5Y 4/2), mostly silt, little sand, dry, no HC odor			
				Bottom boring at 41 feet below ground surface						

DEFINITION OF TERMS

PRIMARY DIVISIONS			GRAPHIC SYMBOL	GROUP SYMBOL	SECONDARY DIVISIONS
COARSE GRAINED SOILS More Than Half Of Material Is Larger Than No. 200 Sieve Size	GRAVELS More Than Half Of Coarse Fraction Is Larger than No. 4 Sieve	Clean Gravels (Less Than 5% Fines)		GW	Well graded gravels, gravel sand mixtures, little or no fines.
		Gravel With Fines		GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
				GM	Silty gravels, gravel-sand-clay mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.	
	SANDS More Than Half Of Coarse Fraction Is Smaller Than No. 4 Sieve	Clean Sands (Less Than 5% Fines)		SW	Well graded sands or gravelly sands, little or no fines.
		Sands With Fines		SP	Poorly graded sands or gravelly sands, little or no fines.
				SM	Silty sands, sand-silt mixtures, plastic fines.
				SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS More Than Half Of Material Is Smaller Than No. 200 Sieve Size	SILTS AND CLAYS Liquid Limit Is Less Than 50%		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.	
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
			OL	Organic silts and organic silty clays of low plasticity.	
	SILTS AND CLAYS Liquid Limit Is Greater Than 50%		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
			CH	Inorganic clays of high plasticity, fat clays.	
			OH	Organic clays of medium to high plasticity, organic silts.	
		HIGHLY ORGANIC SOILS			Pt

SECOR

BOREHOLE/WELL LOG LEGEND

GRAIN SIZES

U.S. Standard Series Sieve				Clear Square Sieve Openings		
200	40	10	4	3/4"	3"	12"
SILTS and CLAYS	SAND			GRAVEL		COBBLES
	Fine	Medium	Coarse	Fine	Coarse	

RELATIVE DENSITY

Sands and Gravels	Blows/Foot [†]
Very Loose	0 - 4
Loose	4 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Over 50

CONSISTENCY

Silts and Clays	Strength [‡]	Blows/Foot [†]
Very Soft	0 - 1/4	0 - 2
Soft	1/4 - 1/2	2 - 4
Firm	1/2 - 1	4 - 8
Stiff	1 - 2	8 - 16
Very Stiff	2 - 4	16 - 32
Hard	Over 4	Over 32

MOISTURE CONTENT:




- Dry - absence of moisture, dusty, dry to the touch.
- Moist - damp but no visible water.
- Wet - visible free water, usually soil is below water table.

† Number of blows of 140 pound hammer falling 30 inches to drive a 2 inch O.D. (1-3/8 inch I.D.) split spoon (ASTM D-1586).

‡ Unconfined compressive strength in tons/sq.ft. as determined by laboratory testing or approximated by the standard penetration test (AST D-1586), pocket penetrometer, torvane, or visual observation.

Soil Component %: Percentages of individual soil component described are relative and based on field observation only.

Graphic Log Symbols

-  Free Product
-  Groundwater (Static)
-  Groundwater (First Encountered)

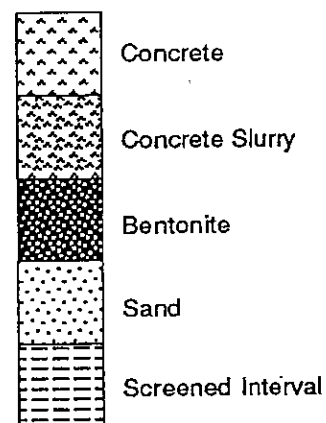
Well Design Symbols

-  Centralizer

Abbreviations Used

ags	Above Ground Surface
msl	Mean Sea Level
A/C	Asphalt/Concrete
Bent	Bentonite
bgs	Below Ground Surface
dia	Diameter
'	Feet
FP	Free Product
GW	Ground Water
HC	Hydrocarbon
"	Inches
med	Medium
mod	Moderate
NA	Not Analyzed
ND	Not Detected
NR	Not Recovered
ppm	Parts Per Million

Well Design Fill Patterns



SECOR

BOREHOLE/WELL LOG LEGEND

APPENDIX B
Drilling Permit

RECEIVED

APR 15 2004



PERMIT #LMON102161

A.P.N. #266-261-01-00

EST #H36819-002

SECOR INTERNATIONAL

COUNTY OF SAN DIEGO
DEPARTMENT OF ENVIRONMENTAL HEALTH
LAND AND WATER QUALITY DIVISION

MONITORING WELL CONSTRUCTION PERMIT

SITE NAME: OFF-SITE FROM CHEVRON STATION #9-2795
SITE ADDRESS: IN STREET, ADJACENT TO 17025 AVENIDAS DE ACACIAS,
RANCHO SANTA FE, CA 92067

PERMIT TO: **INSTALL 1 GROUNDWATERING MONITORING WELL**

PERMIT APPROVAL DATE: APRIL 12, 2004

PERMIT EXPIRES ON: AUGUST 10, 2004

RESPONSIBLE PARTY: CHEVRON ENVIRONMENTAL MANAGEMENT CO.

PERMIT CONDITIONS:

1. Modify construction to permit a 3' bentonite transition seal. Construction approved as follows: 0-3' concrete surface seal, 3-10' annular seal, 10-13' bentonite transition seal, 13-35' filter pack, 15-35' perforation.
2. Wells must have a **minimum 3-foot concrete surface seal**. The surface seal shall consist of concrete able to withstand the maximum anticipated load without cracking or deteriorating. The concrete should meet Class A specifications of a minimum 4000-pound compressive strength.
3. All water and soil resulting from the activities covered by this permit must be managed, stored and disposed of as specified in the SAM Manual in Section 5, E- 4. (http://www.sdcountry.ca.gov/deh/lwg/sam/manual_guidelines.html). In addition, drill cuttings must be properly handled and disposed in compliance with the Stormwater Best Management Practices of the local jurisdiction.
4. Within 60 days of completing work, submit a well construction report, including all well and/or boring logs and laboratory data to the Well Permit Desk. This report must include all items required by the SAM Manual, Section 5, Pages 6 & 7.
5. This office must be given 48-hour notice of any drilling activity on this site and advanced notification of drilling cancellation. Please contact the Well Permit Desk at 338-2339.

APPROVED BY: Carol Spangenberg
CAROL SPANGENBERG

DATE: 04/12/2004

NOTIFIED: by email 4/12/04 msc



PERMIT APPLICATION
GROUNDWATER
AND

VADOSE MONITORING WELLS
AND EXPLORATORY OR TEST BORINGS

PERMIT # W 1404102161
SAM CASE # N #H 30717 JVS
DATE RECEIVED: 2004-03-30-07
FEE PAID: \$ 255.
CHECK # 57282

RECEIVED

2004 MAR 30 PM 12:47

A. RESPONSIBLE PARTY Chevron Environmental Management Co. Phone (925) 842-1589
Mailing Address 6001 Bollinger Canyon Road City San Ramon State CA Zip 94583
Contact Person Karen Streich Phone (925) 842-1589 ext. N/A

B. SITE ASSESSMENT PROJECT IF APPLICABLE # H 36819-002

C. CONSULTING FIRM SECOR International, Inc.
Mailing Address 2655 Camino Del Rio North City San Diego State CA Zip 92108
Registered Professional Ryan Turner Registration # 68176 (R) RCE, CEG)
Contact Person Reed Thornberry Phone (619) 246-6195 ext. 291

D. DRILLING COMPANY West Hazmat Drilling Corp. C57# 819548 Phone (619) 686-5800
Mailing Address 3620 Kurtz St. City San Diego State CA Zip 92110

CONSTRUCTION INFORMATION

TYPE OF WELLS/
BORINGS TO BE
CONSTRUCTED

- #
- ☒ Groundwater 1
- ☐ Vadose
- ☐ Boring
- ☐ Other

NUMBER OF WELLS TO
BE DESTROYED

COUNTY OF SAN DIEGO
DEPARTMENT OF
ENVIRONMENTAL
HEALTH

REC 04-09-04 11:37
EDAR 117429

9141 141 420005
\$255.00
\$255.00

MATERIALS TO BE USED
CASING
SEAL/BORING BACKFILL

Not Applicable

- ☐ Neat Cement
- Type AC
- ☒ Cement & Bentonite

Gauge 3ch. 40

- ☐ Sand-Cement
- Diameter 4"
- ☐ Bentonite

Well Screen Size 0.030

☐ Other

Filter Pack #3 Monterey Sand
(Specify)

Drilling Method

- ☒ Auger
- ☐ Air Rotary
- ☐ Mud Rotary
- ☐ Other
- ☐ Percussion

PROPOSED CONSTRUCTION

Estimated ground water depth 15-20 ft.

Concrete surface seal 0 to 3

Annular seal 3 to 11

Bentonite transition seal 11 to 13

Filter Pack 13 to 35

Perforation 15 to 35

NOTE:

Attach a well construction diagram for wells
with multiple completions

I agree to comply with the requirements of the current Site Assessment and Mitigation Manual, and with all ordinances and laws of the County of San Diego and the State of California pertaining to well/boring construction and destruction.

DRILLER'S SIGNATURE

DATE

3/30/04

Within 60 days of completion, I will furnish the Monitoring Well Permit Desk with a complete and accurate well/boring log. I will certify the design and construction/or destruction of the well/borings in accordance with the permit application.

RG/RCE/CEG SIGNATURE

DATE

3/30/04

F. SITE INFORMATION

1. ASSESSOR'S PARCEL NUMBER _____

Site Name County of San Diego Right of Way

Site Address _____ City Rancho Santa Fe Zip _____

PROPERTY OWNER County of San Diego—See Attached Encroachment Permit Phone _____

Mailing Address _____ City _____ State _____ Zip _____

NUMBER OF WELLS 1 TYPE OF WELLS Groundwater Monitoring Wells

2. ASSESSOR'S PARCEL NUMBER _____

Site Name _____

Site Address _____ City _____ Zip _____

PROPERTY OWNER _____ Phone _____

Mailing Address _____ City _____ State _____ Zip _____

NUMBER OF WELLS _____ TYPE OF WELLS _____

3. ASSESSOR'S PARCEL NUMBER _____

Site Name _____

Site Address _____ City _____ Zip _____

PROPERTY OWNER _____ Phone _____

Mailing Address _____ City _____ State _____ Zip _____

NUMBER OF WELLS _____ TYPE OF WELLS _____

4. ASSESSOR'S PARCEL NUMBER _____

Site Name _____

Site Address _____ City _____ Zip _____

PROPERTY OWNER _____ Phone _____

Mailing Address _____ City _____ State _____ Zip _____

NUMBER OF WELLS _____ TYPE OF WELLS _____

G. FEES (in effect beginning July 1 2003 through June 30, 2004):

ACTIVITY	FEE SCHEDULE	AMOUNT
Permit for Well Installations Only (Groundwater Monitoring Wells, Vadose, Vapor Extraction Wells)	\$165.00 for the first monitoring well	<u>1</u> x \$165.00 \$ <u>165.00</u>
Permit for Well Maintenance Inspection (Valid for three years)	\$ 90.00 for first well maintenance inspection	<u>1</u> x \$ 90.00 \$ <u>90.00</u>
Each Additional New Well	\$140.00 for each additional well installation \$ 30.00 for each additional well maintenance inspection	<u>1</u> x \$140.00 \$ x \$ 30.00 \$
Permit for Borings Only (CPT's, Hydropunch, Geoprobos, Temporary Well Points, etc.)	\$165.00 for the first boring \$45.00 for each additional boring	<u>1</u> x \$165.00 \$ x \$ 45.00 \$
Permit for Well Destructions Only	\$165.00 for the first destruction \$110.00 for each additional destruction	<u>1</u> x \$165.00 \$ x \$110.00 \$
Permit for any Combination of Well Installations, Borings, & Destructions (except UST backfill permit)	The first activity will be \$165.00. Additional activities will be as follows: \$140.00 for each additional well \$ 90.00 for first well maintenance inspection \$ 30.00 for each additional well maintenance inspection \$ 45.00 for each additional boring \$110.00 for each well destruction	<u>1</u> x \$165.00 \$ x \$140.00 \$ <u>1</u> x \$ 90.00 \$ x \$ 30.00 \$ x \$ 45.00 \$ x \$110.00 \$
Permit for Underground Storage Tank Monitoring System in Backfill (i.e. Enhanced Leak Detection)	\$305.00 (Flat Fee)	\$305.00
	TOTAL COST OF PERMIT	\$ <u>255.00</u>

H. APPLICATION SUBMITTAL, PLAN APPROVAL, PERMIT ISSUANCE, AND REQUIRED INSPECTIONS

Submit one (1) original and two (2) copies of this application package, including plan drawings with the required fee to the Monitoring V Permit Desk, Department of Environmental Health, Site Assessment and Mitigation Program (SAM). 1255 Imperial Avenue, San Diego, 92101. Or mail to P. O. Box 129261, San Diego, CA 92112-9261. Information in addition to that presented in the application package r be needed in order to obtain final approval. Checks should be made payable to the County of San Diego.

A permit will be issued by SAM upon review and approval of the application and plans. The required fees must be submitted with application package. No work is to begin on the proposed project until a permit has been issued. The required inspections cannot be scheduled until a permit is issued.

Once the permit has been issued, it is the responsibility of the permittee to notify SAM at least two (2) working days in advance to schedule each required inspection.

USE ONE APPLICATION PACKAGE FOR A SINGLE SITE PROJECT. A SINGLE PERMIT WILL BE ISSUED FOR A SINGLE SITE PROJECT, EVEN IF WELLS/BORINGS ARE COMPLETED ON MORE THAN ONE PROPERTY. PLEASE USE SEPARATE APPLICATIONS FOR MULTIPLE SITE PROJECTS.

PERMIT APPLICATION FOR
GROUND WATER AND VADOSE MONITORING WELLS
EXPLORATORY OR TEST BORINGS

- For well destruction, complete only #1 below.
- Well design, logging and construction must be supervised by a Geologist, Engineering Geologist or Civil Engineer who is registered or certified by the State of California.
- Well driller must have an active C-57 License and current \$7,500 bond with the County.
- Provide a plot plan giving location of property lines, existing improvements such as structures, underground tanks, underground utilities, underground piping, and the proposed monitoring and/or observation wells.
- If applicable, provide a signed copy of the Property Owner Responsibility form for each property listed in Section "F." Provide encroachment/excavation permit and/or traffic control permit for work to be done in street or public right of way.

1. If wells are to be destroyed, provide a description of method of destruction. _____

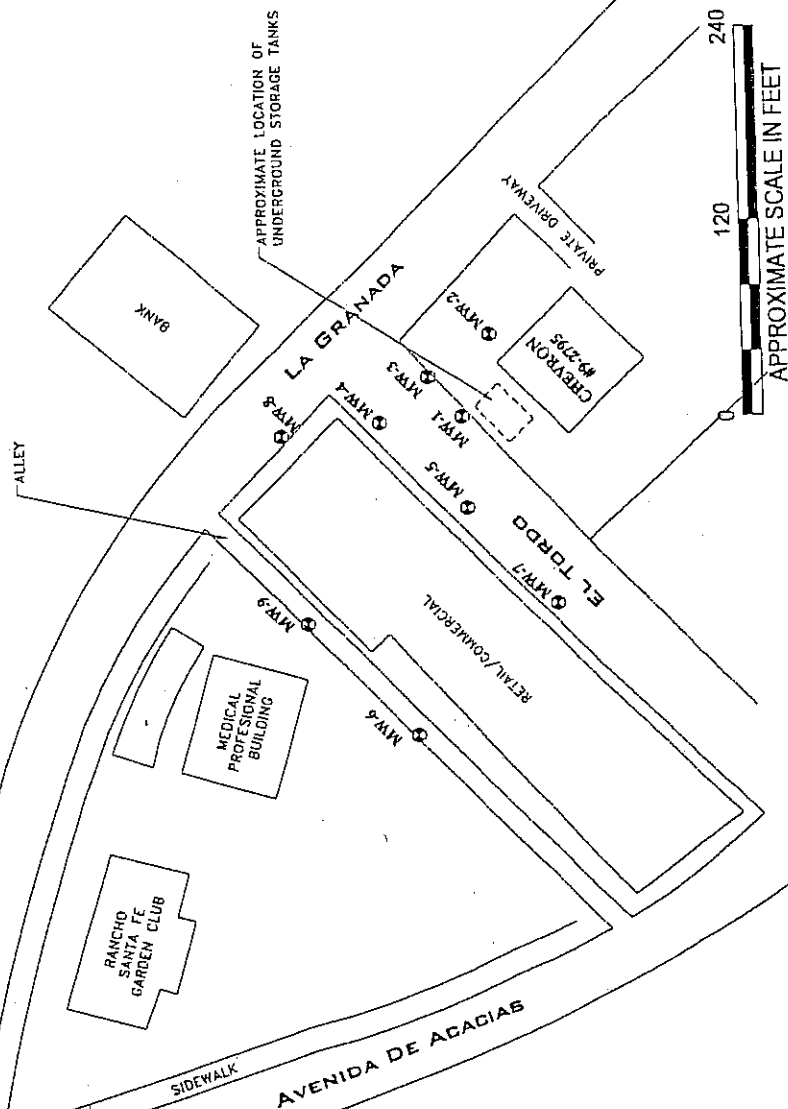
2. What is the purpose of the well/boring investigation? Soil and groundwater investigation

3. What procedures will be used to prevent the well/boring from providing an avenue to contamination during construction?
All downhole equipment will be thoroughly decontaminated prior to use

4. What field procedures will be utilized to determine if contamination exists?
Field screening using an organic vapor analyzer (OVA)

5. What procedures will be used to determine whether samples will be sent for laboratory testing or archiving?
Samples will be sent for laboratory analysis based on field screening results

6. What constituents will be monitored and tested (Include EPA Laboratory Test Methods to be used)?
TPH, BTEX, MTBE, TBA, ETBE, DIPE by EPA 8260B
7. How will samples be transported and preserved? Samples will be transported and preserved in an ice-filled cooler
8. What sampling methods will be used? California Split spoon sampler
9. Are you proposing a variation from the methods and/or procedures presented in the requirements for the construction of Vadose and Ground Water Monitoring Wells (Current SAM Manual Requirements). If yes, specify these variations.
No
10. What procedures will be used to ensure no contamination will be introduced by the drilling equipment?
All downhole equipment will be steam cleaned prior to use
11. What methods will be used to clean sampling equipment? Triple rinse withalconox, tap water, and deionized water
12. What cleaning method will be used to clean casing and screen prior to installation? Only new, factory sealed screen and casing will be used.



LEGEND:

- MW-1 ○ GROUNDWATER MONITORING WELL
- PROPOSED GROUNDWATER MONITORING WELL



SECOR

2655 Camino del Rio North, Suite 302
San Diego, California
619-296-6195/Fax 619-296-6199

PREPARED FOR:

CHEVRON STATION NO. 9-2795
6051 El Tordo
Rancho Santa Fe, California

**PROPOSED MONITORING
WELL LOCATION MAP**

FIGURE:

2

JOB NUMBER:
08CH.52795.03

DRAWN BY:

RJO

CHECKED BY:

APPROVED BY:

DATE:

2/20/04

007010000000

KEY.



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION
5201 Ruffin Road, Suite D
San Diego, CA 92123-4310
(858) 694-3275

Permit Number

N 3942

(KIVA Code: 4940)

Issued: 15-MAR-2004

ENCROACHMENT PERMIT

Charge to:

APPLICANT

SECOR INTERNATIONAL INCORP
2655 CAMINO DEL RIO N #302

SAN DIEGO, CA 92108

Res: 619-296-6195

OWNER

SECOR INTERNATIONAL INCORP
2655 CAMINO DEL RIO N #302

SAN DIEGO CA 92108

Phone: 619-296-6195

SITE ADDRESS:

THOMAS BROS

AVENIDA DE ACACIAS (NB LN, N/O EL TORDO -OPPOSITE RSF SCHOOL &
LIBRARY) RSF TB 1168 D3

APN:

Project: UNASSIGNED

SCOPE OF WORK

Encroachment Description:INSTALL X1 MONITORING WELL Pipe Size:4" Material:SCH 40 PVC
-FLUSH MOUNT WITH SURFACE OF P.C.C. SIDEWALK. NOTE:BMP'S TO BE ENFORCED.REF: E84680

Encroachment will not interfere with the public use & maintenance of:T/W, SHOULDER
OR PARKING LN, SIDE PATH OR SIDEWALK, DRAINAGE STRUCTURE OR WATERCOURSE.

Permit Justification:REQ'D BY COUNTY OF SAN DIEGO, LAND & WATER QUALITY DIVISION.

NOTE:PERMIT REVISED 3/25/04.

This permit is governed by Chapter 6, Division 1, Title 7 of the San Diego County
Code of Regulatory Ordinances.

In consideration of the granting of this permit, the permittee agrees:

1. To save harmless the County of San Diego and any officer or employee thereof for any accident, loss or damage to persons or property, happening or occurring as the proximate result of any placement, change or renewal of an encroachment under the terms of this permit, and to assume all of said liabilities.
2. To comply with all applicable laws in the establishment, maintenance and removal of the encroachment.
3. That he and any other persons engaged in any work authorized by this permit shall conform to all due safety precautions for the protection of persons and property.
4. To remove or relocate any encroachment placed, changed or renewed under the authority of this permit; prior to its expiration or within 24 hours of notification to remove, if the duration is 10 days or less; or within 5 days of notification to remove, if the permit is of indefinite duration.
5. After removing or relocating the encroachment to restore the highway to the equivalent or better condition than it was prior to the date this permit became effective, or prior to the date the encroachment was first placed, whichever is earlier.

In consideration of the above agreement the permit is granted.

County of San Diego,
Director of Public Works by: J. P. Rodil

Date: 3/25/04

The highway is in acceptable condition the permit and agreement are terminated.

County of San Diego,
Director of Public Works by: _____

Date: _____



COUNTY OF SAN DIEGO
DEPARTMENT OF PUBLIC WORKS
LAND DEVELOPMENT DIVISION
5201 Ruffin Road, Suite D
San Diego, CA 92123-4310
(858) 694-3275

Permit Number
E 84680
(KIVA Code: 4930)

Issued: 15-MAR-2004
Expires: 15-MAY-2004
Charge to: YH4680

EXCAVATION PERMIT

APPLICANT
SECOR INTERNATIONAL INCORP
2655 CAMINO DEL RIO N #302

OWNER
SECOR INTERNATIONAL INCORP
2655 CAMINO DEL RIO N #302

SAN DIEGO, CA 92108
Res: 619-296-6195

SAN DIEGO CA 92108
Phone: 619-296-6195

SITE ADDRESS:

THOMAS BROS

AVENIDA DE ACACIAS (NB LN, N/O EL TORO -OPPOSITE RSF SCHOOL &
APN: LIBRARY) RSF TB 1168 D3

QUANTITIES:

Excavation
Length (feet): 0.1

Excavation
Width (feet): 0.1

Excavation
Depth (feet): 35

SCOPE OF WORK

Existing Surface: CONCRETE Purpose of Permit: TRENCH TO INSTALL X1 MONITORING WELL
Pipe Size: 4" Material: SCH 40 PVC -FLUSH MOUNT WITH SURFACE OF P.C.C. SIDEWALK
NOTE: BMP'S TO BE ENFORCED. TRAFFIC CONTROL PERMIT REQ'D. REF: N-3942

NOTE: 3/25/04 -PERMIT & PLAN REVISED, MOVE M.W. FROM ROADWAY INTO CONCRETE SIDEWALK.

Before you dig, call UNDERGROUND SERVICE ALERT at 1-800-422-4133.

Enter UNDERGROUND SERVICE ALERT Inquiry Identification Number here: _____

THIS PERMIT IS NOT VALID UNTIL AN INQUIRY NUMBER IS OBTAINED.

NOTIFY CONSTRUCTION INSPECTION at (858) 694-3165 24 HOURS IN ADVANCE OF
BEGINNING OF ANY PORTION OF WORK, COMPLETION OF WORK, BACK FILL OR CONCRETE POUR,
AND OTHERWISE AS REQUIRED BY THE DIRECTOR OF PUBLIC WORKS.

Work to be performed in accordance with San Diego County Department of
Public Works "Special Provisions for Work Done Under Excavation Permit".

Issuance of this permit does not authorize any work to be performed
until the permission of the property owner has been obtained.

This permit is granted under provisions of Title 7 of the San Diego County Code of
Regulatory Ordinances. It is understood and agreed upon that if this location is
under construction, the consent of the contractor must be obtained. This
installation is granted with the strict understanding that same is subject to
relocation, change of grade, or removal at the Request of the Director, Department of
Public Works. Permittee shall be responsible for any liability due to any accident,
loss or damage resulting from the design or performance of work involved.

County of San Diego, Director of Public Works by: _____

Date Completed: _____

Inspector: _____

THIS PERMIT MUST BE KEPT ON THE WORK TO BE SHOWN TO
ANY AUTHORIZED AGENT OF THE COUNTY UPON REQUEST.

APPENDIX C

Monitoring Well Gauging Logs; Well Purging/Sampling Logs; Well Development Logs

WELL GAUGING DATA

Project # 040507-HA1 Date 5/7/04 Client Chevron

Site 6051 El Tordo Rd Rancho Santa Fe

[illegible]

WELL DEVELOPMENT DATA SHEET

Project #: <u>040507-NR1</u>	Client: <u>Chevron MT 9-279S</u>
Developer: <u>HOYT</u>	Date Developed: <u>5/7/04</u>
Well I.D. <u>MW-10</u>	Well Diameter: (circle one) <u>Ø 3 4 6</u>
Total Well Depth: Before <u>36.30</u> After <u>40.40</u>	Depth to Water: Before <u>26.92</u> After <u>38.62</u>
Reason not developed:	If Free Product, thickness:
Additional Notations:	

Volume Conversion Factor (VCF):

$$[12 \times (d^2/4) \times \pi] / 231$$

where

12 = in / foot

d = diameter (in.)

$\pi = 3.1416$

231 = in ³/gal

Well dia.		VCF
2"	=	0.16
3"	=	0.37
4"	=	0.65
6"	=	1.47
10"	=	4.08
12"	=	6.87

<u>1.5</u>	X	<u>10</u>	=	<u>15.0</u>	gallons
1 Case Volume		Specified Volumes			

Purging Device:

☐ Bailer

☐ Suction Pump

☐ Electric Submersible

☒ Positive Air Displacement

Type of Installed Pump _____

Other equipment used 2" swab

TIME	TEMP (F)	pH	Cond. (mS or μ S)	TURBIDITY (NTUs)	VOLUME REMOVED:	NOTATIONS:
0715	Begin	swabbing	well	for 15 min		
0730	Swabbing	Complete				
0738	Begin	Purge				
0740	70.2	6.4	10,230	>1000	1.5	Heavy silt
0742	69.5	6.8	12,600	>1000	3	
0744	69.0	6.9	14,150	>1000	4.5	DTW 31.60
0746	68.9	6.9	14,990	>1000	6	Turbid
0747	68.9	6.9	15,730	>1000	7.5	Less silty
0748	68.9	6.9	16,280	>1000	9	DTW 33.54
0750	68.9	6.9	17,440	>1000	10.5	
0752	69.1	6.8	18,680	>1000	12	
0753	69.0	6.8	19,140	>1000	13.5	
0755	69.0	6.9	19,600	>1000	15	
Did Well Dewater? <u>Yes</u>			If yes, note above.		Gallons Actually Evacuated:	<u>33</u>

WELL DEVELOPMENT DATA SHEET

Well I.D. <i>MW-10</i>	PAGE 2 OF 2
Project #: <i>040507-HK1</i>	Client: <i>Chevron MT</i>

[illegible]

Page 1 of 1

Job Number 040507-AR1 Technician HOYT

[illegible]

NOTES:

SCOPE OF WORK

as of 5/11/2004

SITE ADDRESS: 6051 EL TORDO
CITY: RANCHO SANTA FE
COUNTY: SAN DIEGO

Lab: DEL MAR
Phone: (949) 261-1022
Release #:

Lock/Key: 3910
Gauge to: TOC

Engineer:
Phone #:

Required regulatory notifications/ cooperative sampling requirements:

GROUNDWATER MONITORING AT CHEVRON

Site #: 9-2795

Consultant: SECOR Mountain View
Name: Maurice Baron
Phone: (650)691-0131

Rpt due date:

Well I.D.	Required Analyses	Sampling Frequency	Sampling Months	Gauging Frequency	Remedial Devices	Notes & Tasks (bail SPH, install skimmer, etc.)
MW-1	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		Check for SPH TRAFFIC CONTROL
MW-2	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		
MW-3	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		
MW-4	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		TRAFFIC CONTROL
MW-5	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		TRAFFIC CONTROL
MW-6	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		
MW-7	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL		

SITE ADDRESS: 6051 EL TORDO

Lab: DEL MAR

Site #: 9-2795

MW-8	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL	
MW-9	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL	
MW-10	TPH-G, BTEX and OXYGENATES by 8260	BIANNUAL	MAY/NOV	BIANNUAL	

CHANGES AND SPECIAL INSTRUCTIONS:

BOTTLE SET:

-TPH-G, BTEX, Oxygenates - 4 HCL voas

Extra Materials:
-Interface Probe

WELL GAUGING DATA

Project # 040513-661 Date 5/13/04 Client Chermon

Site 6051 El Tordo Rd, Rancho Santa Fe

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	
mw-1	4		No SPH			11.85	24.77	TOC	
mw-2	2					13.84	34.34	↓	
mw-3	2					11.19	29.42		
mw-4	4					11.89	25.10		
mw-5	4					12.75	25.05		
mw-6	4					14.78	24.46		
mw-7	2					15.25	27.87		
mw-8	2					10.65	27.92		
mw-9	2					13.62	27.90		
mw-10	2					26.95	40.40		

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: 040513-CG1	Site: 9-2795
Sampler: CG	Date: 5/13/04
Weather: Sunny	Ambient Air Temperature: 75°F
Well I.D.: mw-1	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 24.77	Depth to Water: 11.85
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.43	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other _____ Dedicated Tubing
 Variable Electric Submersible

19.3 (Gals.) X	1.5	= 28.9 Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. <u>mS</u> or µS	Turbidity (NTUs)	Gals. Removed	Observations
1347						- well dewatered @ 16.5 gal - pump slows @ 16 gal
						Fast recharging well
1624	75.7	4.2	17.40	74	20	
1627	73.9	4.4	15.79	13	29	

Did well dewater? Yes No Gallons actually evacuated: 29

Sampling Date: 5/13/04 Sampling Time: 1701 Depth to Water: 14.16

Sample I.D.: mw-1 Laboratory: Del Mar Other _____

Analyzed for: TPH-G BTEX OXYs TPH-D Other: _____

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>88°F</u>
Well I.D.: <u>MW-2</u>	Well Diameter: <u>(2)</u> 3 4 6 8
Total Well Depth: <u>34.34</u>	Depth to Water: <u>13.84</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>17.94</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other _____ Dedicated Tubing
 Variable Electric Submersible

<u>16.4</u> (Gals.) X	<u>1.5</u>	= <u>24.6</u> Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1112	73.0	5.6	18.43	39	17	
1115						well dewatered @ 18 gal
						Fast recharging well DTW @ 1353 = 13.96'
1405	71.6	5.4	18.02	13	25	

Did well dewater? (Yes) No Gallons actually evacuated: 25

Sampling Date: 5/13/04 Sampling Time: 1415 Depth to Water: 17.94

Sample I.D.: MW-2 Laboratory: Del Mar Other _____

Analyzed for: TPH-G BTEX OXYs TPH-D Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-(G)</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>75°F</u>
Well I.D.: <u>mw-3</u>	Well Diameter: <u>②</u> 3 4 6 8 <u> </u>
Total Well Depth: <u>29.42</u>	Depth to Water: <u>11.19</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>14.83</u>	

Purge Method: Bailer Disposable Bailer Middleburg Fixed Electric Submersible Variable Electric Submersible	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other: _____
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<u>14.5</u> (Gals.) X <u>1.5</u> = <u>21.7</u> Gals.	I Borehole Volume Specified Volumes Calculated Volume	
--	---	--

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	Gals. Removed	Observations
1311	73.4	4.6	26.11	65	15	
1312						- Well dewatered @ 18 gal -
						Fast recharging well
1538	75.2	4.4	24.87	521	22	

Did well dewater? <u>Yes</u> No		Gallons actually evacuated: <u>22</u>	
Sampling Date: <u>5/13/04</u>		Sampling Time: <u>1544</u>	Depth to Water: <u>14.53</u>
Sample I.D.: <u>mw-3</u>		Laboratory: <u>Del Mar</u>	Other: _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>OXYS</u> TPH-D Other: _____			
EB I.D. (if applicable): _____ @ _____ Time		Duplicate I.D. (if applicable): _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____			
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge: mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>85°F</u>
Well I.D.: <u>mw-4</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>25.10</u>	Depth to Water: <u>11.89</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(RVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>14.53</u>	

Purge Method: Bailer Disposable Bailer Middleburg Fixed <u>Electric</u> Submersible Variable Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer Disposable <u>Bailer</u> Extraction Port Dedicated Tubing Other:
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<u>19.8</u> (Gals.) X <u>1.5</u> = <u>29.7</u> Gals.	I Borehole Volume Specified Volumes Calculated Volume	
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CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (<u>mS</u> or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1235</u>	<u>75.6</u>	<u>3.8</u>	<u>26.07</u>	<u>176</u>	<u>20</u>	<u>pump shows @ 18 gal</u>
<u>1249</u>	<u>76.0</u>	<u>3.6</u>	<u>26.04</u>	<u>37</u>	<u>30</u>	

Did well dewater? Yes (No) Gallons actually evacuated: 30

Sampling Date: 5/13/04 Sampling Time: 1523 Depth to Water: 12.48

Sample I.D.: mw-4 Laboratory: DaMar Other: _____

Analyzed for: TPH-G BTEX QXYS TPH-D Other: _____

EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____

Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>75°F</u>
Well I.D.: <u>mw-5</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>25.05</u>	Depth to Water: <u>12.75</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>15.21</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other _____ Dedicated Tubing
 Variable Electric Submersible

<u>18.4</u> (Gals.) X <u>1.5</u>	= <u>27.6</u> Gals.	
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1329</u>	<u>73.1</u>	<u>4.3</u>	<u>16.83</u>	<u>33</u>	<u>19</u>	<u>odor, pump slows @ 16 gal</u>
						<u>- well dewatered @ 24 gal -</u>
						<u>- Fast recharging well</u>
<u>1603</u>	<u>75.1</u>	<u>4.3</u>	<u>17.97</u>	<u>27</u>	<u>28</u>	

Did well dewater? <u>(Yes)</u> No	Gallons actually evacuated: <u>28</u>
Sampling Date: <u>5/13/04</u>	Sampling Time: <u>1608</u> Depth to Water: <u>15.16</u>
Sample I.D.: <u>MW-5</u>	Laboratory: <u>Del Mar</u> Other: _____
Analyzed for: <u>(TPH-G)</u> <u>(BTEX)</u> <u>(OXY)</u> TPH-D	Other: _____
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable): _____
Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>86°F</u>
Well I.D.: <u>MW-6</u>	Well Diameter: 2 3 <u>(4)</u> 6 8
Total Well Depth: <u>24.46</u>	Depth to Water: <u>14.75</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>16.69</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
 Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other _____ Dedicated Tubing
 Variable Electric Submersible

<u>14.5</u> (Gals.) X	<u>1.5</u>	= <u>21.7</u> Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1154</u> 1154						
						<u>- well dewatered @ 11 gal -</u>
						<u>CG fast recharging well -</u>
<u>1445</u>	<u>72.9</u>	<u>3.8</u>	<u>22.05</u>	<u>7</u>	<u>15</u>	
<u>1459</u>	<u>73.8</u>	<u>3.8</u>	<u>21.91</u>	<u>38</u>	<u>22</u>	
						<u>- slow recharging well -</u>

Did well dewater? <u>Yes</u> No		Gallons actually evacuated: <u>22</u>	
Sampling Date: <u>5/13/04</u>	Sampling Time: <u>1710</u>	Depth to Water: <u>19.57</u>	
Sample I.D.: <u>MW-6</u>	Laboratory: <u>Del Mar</u>	Other: _____	
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>OXY</u> TPH-D Other: _____			
EB I.D. (if applicable): _____ @ _____ Time		Duplicate I.D. (if applicable): _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____			
D.O. (if req'd):	Pre-purge: _____ mg/L	Post-purge: _____	mg/L
O.R.P. (if req'd):	Pre-purge: _____ mV	Post-purge: _____	mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>—</u>
Well I.D.: <u>mw-7</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u>—</u>
Total Well Depth: <u>27.87</u>	Depth to Water: <u>15.25</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>17.77</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other _____ Dedicated Tubing
 Variable Electric Submersible

<u>10.0</u> (Gals.) X	<u>1.5</u>	= <u>15.0</u> Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (<u>ms</u> or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1018</u>	<u>71.1</u>	<u>3.6</u>	<u>23.52</u>	<u>281</u>	<u>10</u>	
<u>1025</u>	<u>72.3</u>	<u>3.7</u>	<u>23.91</u>	<u>196</u>	<u>15</u>	

Did well dewater? Yes <u>(No)</u>		Gallons actually evacuated: <u>15</u>	
Sampling Date: <u>5/13/04</u>		Sampling Time: <u>CG</u> 10:33 <u>1043</u> Depth to Water: <u>17.75</u>	
Sample I.D.: <u>mw-7</u>		Laboratory: <u>Del Mar</u> Other _____	
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>OXYR</u> TPH-D Other: _____			
EB I.D. (if applicable): _____ @ _____ Time		Duplicate I.D. (if applicable): _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____			
D.O. (if req'd):	Pre-purge:	<u> </u> mg/L	Post-purge: <u> </u> mg/L
O.R.P. (if req'd):	Pre-purge:	<u> </u> mV	Post-purge: <u> </u> mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-C61</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Sunny</u>	Ambient Air Temperature: <u>68°F</u>
Well I.D.: <u>MW-8</u>	Well Diameter: <u>(2)</u> 3 4 6 8 <u> </u>
Total Well Depth: <u>27.92</u>	Depth to Water: <u>10.65</u>
Depth to Free Product: <u> </u>	Thickness of Free Product (feet): <u> </u>
Referenced to: <u>(PVC)</u> Grade <u> </u>	D.O. Meter (if req'd): <u>YSI</u> <u>HACH</u>
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>14.10</u>	

Purge Method: Bailer Waterra Sampling Method: Bailer
 Disposable Bailer Peristaltic Disposable Bailer
Middleburg Extraction Pump Extraction Port
 Fixed Electric Submersible Other Dedicated Tubing
 Variable Electric Submersible

<u>13.8</u> (Gals.) X <u>1.5</u>	= <u>20.7</u> Gals.	
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
937	68.8	4.0	16.27	417	14	
944	69.3	3.8	17.37	185	21	

Did well dewater? Yes <u>(No)</u>		Gallons actually evacuated: <u>21</u>	
Sampling Date: <u>5/13/04</u>		Sampling Time: <u>955</u>	Depth to Water: <u>14.07</u>
Sample I.D.: <u>MW-8</u>		Laboratory: <u>Del Mar</u>	Other: <u> </u>
Analyzed for: <u>(TPH-G)</u> <u>(BTEX)</u> <u>(OXYS)</u> TPH-D Other: <u> </u>			
EB I.D. (if applicable): <u> </u> @ <u> </u> Time		Duplicate I.D. (if applicable): <u> </u>	
Analyzed for: TPH-G BTEX MTBE TPH-D Other: <u> </u>			
D.O. (if req'd):	Pre-purge:	<u> </u> mg/L	Post-purge: <u> </u> mg/L
O.R.P. (if req'd):	Pre-purge:	<u> </u> mV	Post-purge: <u> </u> mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: 040513-61	Site: 9-2795
Sampler: CG	Date: 5/13/04
Weather: Sunny	Ambient Air Temperature: 78°F
Well I.D.: mw-9	Well Diameter: (2) 3 4 6 8
Total Well Depth: 27.90	Depth to Water: 13.62
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.47	

Purge Method: Bailer Disposable Bailer (Middleburg) Fixed Electric Submersible Variable Electric Submersible	Waterra Peristaltic Extraction Pump Other:	Sampling Method: Bailer Disposable Bailer Extraction Port Dedicated Tubing Other:
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11.4 (Gals.) X	1.5	= 17.1 Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. CG (mS/cm)	Turbidity (NTUs)	Gals. Removed	Observations
1135	-well	dewatered @ 10 gal				
	Fast	recharging well				DTW @ 1420 = 13.20'
1428	70.5	3.6	24.44	298	12	
1433	69.6	3.5	24.75	376	18	

Did well dewater? (Yes) No		Gallons actually evacuated: 18	
Sampling Date: 5/13/04		Sampling Time: 1502	Depth to Water: 16.12
Sample I.D.: mw-9		Laboratory: Del Mar	Other:
Analyzed for: TPH-G BTEX OXYS TPH-D Other:			
EB I.D. (if applicable): @ Time		Duplicate I.D. (if applicable):	
Analyzed for: TPH-G BTEX MTBE TPH-D Other:			
D.O. (if req'd):	Pre-purge:	mg/L	Post-purge: mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge: mV

SAN DIEGO COUNTY CHEVRON WELL MONITORING DATA SHEET

BTS #: <u>040513-CG1</u>	Site: <u>9-2795</u>
Sampler: <u>CG</u>	Date: <u>5/13/04</u>
Weather: <u>Partly Cloudy</u>	Ambient Air Temperature: <u>65°F</u>
Well I.D.: <u>MW-10</u>	Well Diameter: <u>2</u> 3 4 6 8 <u> </u>
Total Well Depth: <u>40.40</u>	Depth to Water: <u>26.95</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>(PVC)</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>29.64</u>	

Purge Method: Bailer Disposable Bailer <u>Middleburg</u> Fixed Electric Submersible Variable Electric Submersible	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: Bailer Disposable <u>Bailer</u> Extraction Port Dedicated Tubing Other: _____
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<u>10.7</u> (Gals.) X	<u>1.5</u>	= <u>16.0</u> Gals.
1 Borehole Volume	Specified Volumes	Calculated Volume

CD	BD	Multiplier	CD	BD	Multiplier	CD	BD	Multiplier
2"	8"	0.8	4"	8"	1.1	6"	10"	2.1
2"	10"	1.1	4"	10"	1.5	6"	12"	2.6
			4"	12"	2.0			

Assumes 25% borehole porosity
 CD = casing diameter BD = borehole diameter

Time	Temp (°F)	pH	Cond. (<u>mS</u> or μ S)	Turbidity (NTUs)	Gals. Removed	Observations
843	67.9	6.0	20.63	71000	11	Turbid
848	68.7	5.9	20.64	71000	16	

Did well dewater? Yes <u>(No)</u>	Gallons actually evacuated: <u>16</u>
Sampling Date: <u>5/13/04</u>	Sampling Time: <u>901</u>
Depth to Water: <u>29.60</u>	
Sample I.D.: <u>MW-10</u>	Laboratory: <u>Del Mar</u> Other: _____
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>OXYS</u> TPH-D Other: _____	
EB I.D. (if applicable): _____ @ _____ Time	Duplicate I.D. (if applicable): _____
Analyzed for: TPH-G BTEX MTBE TPH-D Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L	Post-purge: _____ mg/L
O.R.P. (if req'd): Pre-purge: _____ mV	Post-purge: _____ mV

CHAIN OF CUSTODY FORM

COC (of)

CA 92822-2292

Brea, CA

145 S. State College Boulevard

Chevron Environmental Management Company

Chevron Site Global ID: IO607399173

Chevron Site Number 9-2795

Chevron Site Address: 6051 El Tordo, Rancho Santa Fe

Chevron PM: SECOR, c/o Madeline Montilla
2301 Leghorn, Mountain View, CA 94043

Chevron MT PM Phone No.: (650) 691-0131 x 235

MT Job No: MTCH.92795.08

Chevron Service Code: ZZ02800
X Management Transfer - SO CA Portfolio Job
E-Construction/Retail Job-of
E-Retail and Terminal Business Unit (RTBU) Job

NOTE:
THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT
CORRECTLY AND COMPLETELY.

SAMPLE ID

Field Point Name	Matrix	Top Depth	Date (yy/mm/dd)
MW-1	W		04/05/15
MW-2			
MW-3			
MW-4			
MW-5			
MW-6			
MW-7			
MW-8			
MW-9			
MW-10			

Relinquished By	Company	Date/Time:
Relinquished By	Company	Date/Time:
Relinquished By	Company	Date/Time:

Chevron Consultant: SECOR International, Inc.

Address: 2301 Leghorn, Mountain View, CA 94043

Consultant Contact: Maurice Baron

Consultant Phone No. (650) 691-0131

Consultant Project No. MTCH.92795.08

Sampling Company: BISI

Sampled By (Print): Chris Gordon

Sampler Signature: *CC*

Del Mar Analytical	Lancaster Laboratories	EDF Required?
X Irvine, CA X Colton, CA Lab Contact: Phone No: X (949) 261-1022 X (909) 370-4667	X Lancaster, PA Lab Contact: Teresa Cunningham Phone No: X (717) 656-2300	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Sample Time	Container Type	# of Containers	Preservation
1701	W04	4	HCl
1415			
1544			
1523			
1608			
1710			
1043			
955			
1502			
901			

Relinquished To	Company	Date/Time:
Relinquished To	Company	Date/Time:
Relinquished To	Company	Date/Time:

ANALYSES REQUIRED

EPA 8015B GRO	<input type="checkbox"/>	EPA 8021B BTEX	<input type="checkbox"/>	EPA 8260B (PH-G) BTEX	<input checked="" type="checkbox"/>	EPA 6010 CA, FE, K, MG, MN, NA	<input type="checkbox"/>	EPA 6010/7000 TITLE 22 METALS	<input type="checkbox"/>	EPA 310.1 ALKALINITY	<input type="checkbox"/>	SM 2510B SPECIFIC CONDUCTIVITY	<input type="checkbox"/>	EPA 418.1 TRPH	<input type="checkbox"/>	EPA 413.1 OIL/GREASES	<input type="checkbox"/>
ORPO	<input type="checkbox"/>	TPHd	<input type="checkbox"/>	HC SCREEN	<input type="checkbox"/>	MTBE	<input type="checkbox"/>	OXYGENATES	<input checked="" type="checkbox"/>	HVOC	<input type="checkbox"/>						

Turnaround Time:	in	Standard	<input checked="" type="checkbox"/>
24 Hours	<input type="checkbox"/>	Other	<input type="checkbox"/>
48 hours	<input type="checkbox"/>	Temp:	

Sample Integrity: (Check by lab on arrival)
Intact: On Ice: Temp:

APPENDIX D

Waste Disposal Documentation

TPS Technologies Soil Recycling

Non-Hazardous Soils

Date of Shipment: 4-14-04	Responsible for Payment:	Transporter Truck #: 922	Facility #:	Given by TPS: 22879	Load #:
-------------------------------------	--------------------------	------------------------------------	-------------	-------------------------------	---------

Generator's Name and Billing Address: CHEVRON PRODUCTS CO. P.O. BOX 6004 SAN RAMON, CA 94583 ATTN: KATIA NORRIS	Generator's Phone #:	Generator's US EPA ID No.:
	Person to Contact: K. HREICH	
	FAX#: D. REGLET	Customer Account Number with TPS:

Consultant's Name and Billing Address: SECOR INTERNATIONAL, INC. 2655 CAMINO DEL RIO NORTH, SUITE 302 SAN DIEGO, CA	Consultant's Phone #: (619) 230-1286	
	Person to Contact: R. THORNBERRY	
	FAX#: (619) 266-6189	Customer Account Number with TPS:

Generation Site (Transport from): (name & address) CHEVRON S/S # 8-2785 6051 EL TORDO RANCHO SANTA FE, CA TWR # 9349540 LINE 27	Site Phone #:	BTEX Levels:
	Person to Contact:	TPH Levels:
	FAX#:	AVG. Levels:

Designated Facility (Transport to): (name & address) TPS TECHNOLOGIES 12326 HIBISCUS AVENUE ADELANTO, CA 92301	Facility Phone #: (800) 882-8001	Facility Permit Numbers:
	Person to Contact: JOE PROVANSAL	
	FAX#:	

Transporter Name and Mailing Address: PSC INDUSTRIAL OUTSOURCING GROUP 1661 E. 32ND STREET LONG BEACH, CA 90805	Transporter's Phone #: (562) 997-6000	Transporter's US EPA ID No.:
	Person to Contact: LOU BAILEY	Transporter's DOT No.:
	FAX#: (562) 997-6058	Customer Account Number with TPS:

Description of Soil	Moisture Content	Contaminated by:	Approx. Qty:	Description of Delivery	Gross Weight	Tare Weight	Net Weight
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>	2800	4 X DM	13000	8020	4980
Sand <input type="checkbox"/> Organic <input type="checkbox"/> Clay <input type="checkbox"/> Other <input type="checkbox"/>	0 - 10% <input type="checkbox"/> 10 - 20% <input type="checkbox"/> 20% - over <input type="checkbox"/>	Gas <input type="checkbox"/> Diesel <input type="checkbox"/> Other <input type="checkbox"/>					249

List any exception to items listed above: **110189**

Generator's and/or consultant's certification: I/We certify that the soil referenced herein is taken entirely from those soils described in the Soil Data Sheet completed and certified by me/us for the Generation Site shown above and nothing has been added or done to such soil that would alter it in any way.

Print or Type Name: **JEANINE DUNCAN** Signature and date: **J. Duncan** Month: **4** Day: **13** Year: **04**

Transporter's certification: I/We acknowledge receipt of the soil described above and certify that such soil is being delivered in exactly the same condition as when received. I/We further certify that this soil is being directly transported from the Generation Site to the Designated Facility without off-loading, adding to, subtracting from or in any way delaying delivery to such site.

Print or Type Name: **JOE PROVANSAL** Signature and date: **Joe Provansal** Month: **04** Day: **14** Year: **04**

Recycling Facility

Recycling Facility certifies the receipt of the soil covered by this manifest except as noted above:

Print or Type Name: **JOE PROVANSAL / DELLENA BENTON** Signature and date: **Joe Provansal** **7-7-4**

street number	street name	city	state
6051	El Tordo Rd	Rancho Santa Fe CA	

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-101	33		1
			1
			1
			1
			1
			1
			1
			1
			1
added equip.	3	any other	1
rinse water		adjustments	
TOTAL GALS. RECOVERED	36	loaded onto BTS vehicle #	43
BTS event # 040507-NR1		time 0830	date 517104
signature <i>[Signature]</i>			

REC'D AT BTS Lowery		time	date 517104
unloaded by signature <i>[Signature]</i>			

CHEVRON-SOUTHERN CALIFORNIA TYPE A BILL OF LADING

SOURCE RECORD **BILL OF LADING**

FOR NON-HAZARDOUS PURGewater RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE- WATER WHICH HAS BEEN RECOVERED FROM GROUND- WATER WELLS IS COLLECTED BY THE CONTRACTOR, MADE UP INTO LOADS OF APPROPRIATE SIZE AND HAULED BY PSC TO THEIR FACILITY IN LONG BEACH, CALIFORNIA.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE), 13741 Danielson St. Suite E, Poway, CA (phone [310] 885-4455). Blaine Tech Services, Inc. is authorized by CHEVRON PRODUCTS COMPANY to recover, collect, apportion into loads, and haul the Non-Hazardous Well Purgewater that is drawn from wells at the CHEVRON facility indicated below and to deliver that purgewater to BLAINE. Transport routing of the Non-Hazardous Well Purgewater may be direct from one Chevron facility to BLAINE; from one Chevron facility to BLAINE via another Chevron facility; or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of Chevron Products Company.

This Source Record **BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

9-2795

CHEVRON #

6051 El Torado Rd, Bunko Santa Fe, CA
street number street name city state

WELL I.D. GALS. WELL I.D. GALS.

MW-1 1 726

/

/

/

/

/

/

/

/

/

/

/

/

/

/

/

added equip.

any other

rinse water 1 20

adjustments /

TOTAL GALS.

loaded onto

RECOVERED 246

BTS vehicle # 46

BTS event #

time

240513-061

1710

date

signature *CA ghl*

5 1/3 104

REC'D AT

time

BTS- Poway

1800

date

5 1/3 104

unloaded by

signature

CA ghl

APPENDIX E

Wellhead Survey Elevation Report

Notes

Field Survey performed on October 2, 2003. Well Id's per SECOR information. Survey Accuracies per Scope of Services letter dated September 25, 2003. Horizontal Coordinates are California Coordinates Zone 6, NAD83, 1991.35 epoch All well rim and casing elevations are located on the northerly side, and are painted black, unless otherwise noted. MW-A surveyed April 20, 2004.

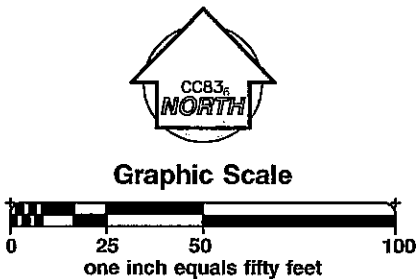
Benchmark

County of San Diego Benchmark No. ES 0045; chiseled square in top of curb at the northeast corner of La Granada and Avenida Acacia, per County of San Diego information. Elevation = 195.95 NGVD29 Datum (add 2.17' for NAVD88 per VERTCON)



MW-A

MW-A
GRID N: 1952634.47
GRID E: 6268917.82
LATITUDE: 33°01'15.857"
LONGITUDE: 117°12'18.287"
207.95 2" PVC Casing
208.60 Rim



MEDICAL PROFESSIONAL BUILDING

MW-8
GRID N: 1952589.40
GRID E: 6269312.03
LATITUDE: 33°01'15.446"
LONGITUDE: 117°12'13.652"
229.67 2" PVC Casing
230.11 Rim

MW-9
GRID N: 1952570.12
GRID E: 6269202.47
LATITUDE: 33°01'15.246"
LONGITUDE: 117°12'14.937"
227.53 2" PVC Casing
227.80 Rim

MW-6
GRID N: 1952516.20
GRID E: 6269132.95
LATITUDE: 33°01'14.706"
LONGITUDE: 117°12'15.748"
227.76 4" PVC Casing
228.20 Rim

MW-5
GRID N: 1952471.71
GRID E: 6269276.37
LATITUDE: 33°01'14.279"
LONGITUDE: 117°12'14.058"
232.77 4" PVC Casing
233.70 Rim

MW-3
GRID N: 1952482.38
GRID E: 6269361.03
LATITUDE: 33°01'14.392"
LONGITUDE: 117°12'13.065"
233.78 2" PVC Casing
234.37 S. Rim

MW-2
GRID N: 1952441.74
GRID E: 6269376.65
LATITUDE: 33°01'13.991"
LONGITUDE: 117°12'12.878"
237.38 2" PVC Casing
238.05 S. Rim

MW-1
GRID N: 1952468.37
GRID E: 6269335.49
LATITUDE: 33°01'14.231"
LONGITUDE: 117°12'13.365"
233.97 4" PVC Casing
234.42 Rim

MW-7
GRID N: 1952417.87
GRID E: 6269220.88
LATITUDE: 33°01'13.741"
LONGITUDE: 117°12'14.707"
234.22 W 2" PVC Casing
234.62 S. Rim



April 20, 2004
John E. Hank P.L.S.
Professional Land Surveyor
License No. 6165 Expires March 31, 2006

Southern California Survey
land • marine • aerial surveys
Chicago, Illinois • San Diego, California • Scottsdale, Arizona
(619) 563-2888 fax (858) 492-0950



Former No. 9-2795
6051 El Tordo
Rancho Santa Fe, California

APPENDIX F

Subsurface Soil and Groundwater Laboratory Reports and Chain-of-Custody Documentation

LABORATORY REPORT

Prepared For: SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project: Chevron 9-2795

Sampled: 04/13/04
Received: 04/14/04
Issued: 04/28/04

NELAP #01108CA CA ELAP #1197

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.
This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE**LABORATORY ID**

IND0925-01

CLIENT ID

MW-10-S-25'-040413

MATRIX

Soil



Del Mar Analytical, Irvine
Chris Roberts
Project Manager

SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04
Received: 04/14/04

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IND0925-01 (MW-10-S-25'-040413 - Soil)								
Reporting Units: ug/kg								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4D16013	100	ND	1	4/16/2004	4/16/2004	
Surrogate: Dibromofluoromethane (80-125%)				110 %				
Surrogate: Toluene-d8 (80-120%)				104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				

Del Mar Analytical, Irvine
Chris Roberts
Project ManagerThe results pertain only to the samples tested in the laboratory. This report shall not be reproduced,
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IND0925 <Page 2 of 8>

SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04
Received: 04/14/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: IND0925-01 (MW-10-S-251-040413 - Soil)								
Reporting Units: ug/kg								
Benzene	EPA 8260B	4D16013	50	ND	1	4/16/2004	4/16/2004	
Ethylbenzene	EPA 8260B	4D16013	50	ND	1	4/16/2004	4/16/2004	
Toluene	EPA 8260B	4D16013	50	ND	1	4/16/2004	4/16/2004	
o-Xylene	EPA 8260B	4D16013	50	ND	1	4/16/2004	4/16/2004	
m,p-Xylenes	EPA 8260B	4D16013	100	ND	1	4/16/2004	4/16/2004	
Xylenes, Total	EPA 8260B	4D16013	150	ND	1	4/16/2004	4/16/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4D16013	5.0	ND	1	4/16/2004	4/16/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4D16013	5.0	ND	1	4/16/2004	4/16/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4D16013	5.0	ND	1	4/16/2004	4/16/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4D16013	10	ND	1	4/16/2004	4/16/2004	
tert-Butanol (TBA)	EPA 8260B	4D16013	50	ND	1	4/16/2004	4/16/2004	C
<i>Surrogate: Dibromofluoromethane (80-125%)</i>				110 %				
<i>Surrogate: Toluene-d8 (80-120%)</i>				104 %				
<i>Surrogate: 4-Bromofluorobenzene (80-120%)</i>				101 %				

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04
Received: 04/14/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4D16013 Extracted: 04/16/04										
Blank Analyzed: 04/16/04 (4D16013-BLK1)										
Volatile Fuel Hydrocarbons (C4-C12)	ND	100	ug/kg							
Surrogate: Dibromofluoromethane	54.5		ug/kg	50.0		109	80-125			
Surrogate: Toluene-d8	51.8		ug/kg	50.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	50.1		ug/kg	50.0		100	80-120			
LCS Analyzed: 04/16/04 (4D16013-BS2)										
Volatile Fuel Hydrocarbons (C4-C12)	912	100	ug/kg	1000		91	65-120			
Surrogate: Dibromofluoromethane	49.0		ug/kg	50.0		98	80-125			
Surrogate: Toluene-d8	53.1		ug/kg	50.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	50.9		ug/kg	50.0		102	80-120			
Matrix Spike Analyzed: 04/16/04 (4D16013-MS1)										
					Source: IND0816-38					
Volatile Fuel Hydrocarbons (C4-C12)	3080	100	ug/kg	2330	ND	132	60-135			
Surrogate: Dibromofluoromethane	56.9		ug/kg	52.0		109	80-125			
Surrogate: Toluene-d8	54.1		ug/kg	52.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	57.3		ug/kg	52.0		110	80-120			
Matrix Spike Dup Analyzed: 04/16/04 (4D16013-MSD1)										
					Source: IND0816-38					
Volatile Fuel Hydrocarbons (C4-C12)	2890	120	ug/kg	2600	ND	111	60-135	6	20	
Surrogate: Dibromofluoromethane	66.3		ug/kg	58.1		114	80-125			
Surrogate: Toluene-d8	61.1		ug/kg	58.1		105	80-120			
Surrogate: 4-Bromofluorobenzene	62.6		ug/kg	58.1		108	80-120			

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04

Received: 04/14/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4D16013 Extracted: 04/16/04										
Blank Analyzed: 04/16/04 (4D16013-BLK1)										
Benzene	ND	50	ug/kg							
Ethylbenzene	ND	50	ug/kg							
Toluene	ND	50	ug/kg							
o-Xylene	ND	50	ug/kg							
m,p-Xylenes	ND	100	ug/kg							
Xylenes, Total	ND	150	ug/kg							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/kg							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/kg							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/kg							
Methyl-tert-butyl Ether (MTBE)	ND	10	ug/kg							
tert-Butanol (TBA)	ND	50	ug/kg							
Surrogate: Dibromofluoromethane	54.5		ug/kg	50.0		109	80-125			
Surrogate: Toluene-d8	51.8		ug/kg	50.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	50.1		ug/kg	50.0		100	80-120			
LCS Analyzed: 04/16/04 (4D16013-BS1)										
Benzene	39.6	50	ug/kg	50.0		79	70-120			
Ethylbenzene	47.9	50	ug/kg	50.0		96	75-125			
Toluene	43.1	50	ug/kg	50.0		86	75-120			
o-Xylene	47.9	50	ug/kg	50.0		96	75-125			
m,p-Xylenes	92.3	100	ug/kg	100		92	75-125			
Xylenes, Total	140	150	ug/kg	150		93	75-125			
Di-isopropyl Ether (DIPE)	38.6	5.0	ug/kg	50.0		77	65-135			
Ethyl tert-Butyl Ether (ETBE)	40.1	5.0	ug/kg	50.0		80	60-140			
tert-Amyl Methyl Ether (TAME)	38.5	5.0	ug/kg	50.0		77	60-140			
Methyl-tert-butyl Ether (MTBE)	37.7	10	ug/kg	50.0		75	55-145			
tert-Butanol (TBA)	287	50	ug/kg	250		115	70-140			
Surrogate: Dibromofluoromethane	55.8		ug/kg	50.0		112	80-125			
Surrogate: Toluene-d8	51.8		ug/kg	50.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	55.8		ug/kg	50.0		112	80-120			

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04
Received: 04/14/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4D16013 Extracted: 04/16/04										
Matrix Spike Analyzed: 04/16/04 (4D16013-MS1)					Source: IND0816-38					
Benzene	58.6	50	ug/kg	52.0	ND	113	65-130			
Ethylbenzene	70.4	50	ug/kg	52.0	ND	135	70-130			MI
Toluene	62.7	50	ug/kg	52.0	ND	121	70-125			
o-Xylene	70.1	50	ug/kg	52.0	ND	135	70-125			MI
m,p-Xylenes	134	100	ug/kg	104	ND	129	70-125			MI
Xylenes, Total	204	150	ug/kg	156	ND	131	70-125			MI
Di-isopropyl Ether (DIPE)	53.6	5.0	ug/kg	52.0	ND	103	65-145			
Ethyl tert-Butyl Ether (ETBE)	52.3	5.0	ug/kg	52.0	ND	101	60-145			
tert-Amyl Methyl Ether (TAME)	50.6	5.0	ug/kg	52.0	ND	97	60-145			
Methyl-tert-butyl Ether (MTBE)	47.1	10	ug/kg	52.0	ND	91	50-150			
tert-Butanol (TBA)	500	50	ug/kg	260	ND	192	65-140			MI
Surrogate: Dibromofluoromethane	56.9		ug/kg	52.0		109	80-125			
Surrogate: Toluene-d8	54.1		ug/kg	52.0		104	80-120			
Surrogate: 4-Bromofluorobenzene	57.3		ug/kg	52.0		110	80-120			

Matrix Spike Dup Analyzed: 04/16/04 (4D16013-MSD1)					Source: IND0816-38					
Benzene	52.4	58	ug/kg	58.1	ND	90	65-130	11	20	
Ethylbenzene	64.1	58	ug/kg	58.1	ND	110	70-130	9	20	
Toluene	57.3	58	ug/kg	58.1	ND	99	70-125	9	20	
o-Xylene	63.7	58	ug/kg	58.1	ND	110	70-125	10	20	
m,p-Xylenes	124	120	ug/kg	116	ND	107	70-125	8	20	
Xylenes, Total	187	170	ug/kg	174	ND	107	70-125	9	20	
Di-isopropyl Ether (DIPE)	50.9	5.8	ug/kg	58.1	ND	88	65-145	5	20	
Ethyl tert-Butyl Ether (ETBE)	52.0	5.8	ug/kg	58.1	ND	90	60-145	1	25	
tert-Amyl Methyl Ether (TAME)	50.1	5.8	ug/kg	58.1	ND	86	60-145	1	25	
Methyl-tert-butyl Ether (MTBE)	48.2	12	ug/kg	58.1	ND	83	50-150	2	25	
tert-Butanol (TBA)	369	58	ug/kg	291	ND	127	65-140	30	30	
Surrogate: Dibromofluoromethane	66.3		ug/kg	58.1		114	80-125			
Surrogate: Toluene-d8	61.1		ug/kg	58.1		105	80-120			
Surrogate: 4-Bromofluorobenzene	62.6		ug/kg	58.1		108	80-120			

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04

Received: 04/14/04

DATA QUALIFIERS AND DEFINITIONS

- C** Calibration Verification recovery was above the method control limit for this analyte. Analyte not detected, data not impacted.
- M1** The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
- ND** Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
- RPD** Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD.
The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C4-C12):

Volatile Fuel Hydrocarbons (C4-C12) are quantitated against a gasoline standard. Quantitation begins immediately before TBA-d9.

Del Mar Analytical, Irvine
Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Ryan Turner

Project ID: Chevron 9-2795

Report Number: IND0925

Sampled: 04/13/04
Received: 04/14/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
EPA 8260B	Soil	X	X
TPH by GC/MS	Soil	X	X

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

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Chris Roberts
Project Manager

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LABORATORY REPORT

Prepared For: SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project: Chevron 9-2795

Sampled: 05/13/04
Received: 05/17/04
Issued: 05/28/04 15:33

NELAP #01108CA CA ELAP #1197 CSDLAC #10117

The results listed within this Laboratory Report pertain only to the samples tested in the laboratory. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of Del Mar Analytical and its client. This report shall not be reproduced, except in full, without written permission from Del Mar Analytical. The Chain of Custody, 1 page, is included and is an integral part of this report.

This entire report was reviewed and approved for release.

SAMPLE CROSS REFERENCE

LABORATORY ID	CLIENT ID	MATRIX
INE0948-01	MW-1-W-040513	Water
INE0948-02	MW-2-W-040513	Water
INE0948-03	MW-3-W-040513	Water
INE0948-04	MW-4-W-040513	Water
INE0948-05	MW-5-W-040513	Water
INE0948-06	MW-6-W-040513	Water
INE0948-07	MW-7-W-040513	Water
INE0948-08	MW-8-W-040513	Water
INE0948-09	MW-9-W-040513	Water
INE0948-10	MW-10-W-040513	Water

Reviewed By:

Heather A Bean

Del Mar Analytical, Irvine
Heather Bean For Chris Roberts
Project Manager



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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-01 (MW-1-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E22014	50000	90000	100	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				112 %				
Surrogate: Toluene-d8 (80-120%)				112 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				110 %				
Sample ID: INE0948-02 (MW-2-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E21016	500	540	1	5/21/2004	5/21/2004	
Surrogate: Dibromofluoromethane (80-120%)				112 %				
Surrogate: Toluene-d8 (80-120%)				105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				
Sample ID: INE0948-03 (MW-3-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E22014	10000	13000	20	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				116 %				
Surrogate: Toluene-d8 (80-120%)				112 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				
Sample ID: INE0948-04 (MW-4-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E22014	5000	8800	10	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				114 %				
Surrogate: Toluene-d8 (80-120%)				112 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				112 %				
Sample ID: INE0948-05 (MW-5-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E22012	50000	ND	100	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				112 %				
Surrogate: Toluene-d8 (80-120%)				106 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				103 %				
Sample ID: INE0948-06 (MW-6-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E22012	5000	ND	10	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				114 %				
Surrogate: Toluene-d8 (80-120%)				108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				105 %				

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Heather Bean For Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-07 (MW-7-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E23010	500	ND	1	5/23/2004	5/23/2004	
Surrogate: Dibromofluoromethane (80-120%)				117 %				
Surrogate: Toluene-d8 (80-120%)				110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				
Sample ID: INE0948-08 (MW-8-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E21016	500	ND	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				106 %				
Surrogate: Toluene-d8 (80-120%)				107 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				
Sample ID: INE0948-09 (MW-9-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E21016	500	1500	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				108 %				
Surrogate: Toluene-d8 (80-120%)				104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				104 %				
Sample ID: INE0948-10 (MW-10-W-040513 - Water)								
Reporting Units: ug/l								
Volatile Fuel Hydrocarbons (C4-C12)	TPH by GC/MS	4E21016	500	ND	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				108 %				
Surrogate: Toluene-d8 (80-120%)				108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				103 %				

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-01 (MW-1-W-040513 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4E23010	250	8500	500	5/23/2004	5/23/2004	
Ethylbenzene	EPA 8260B	4E23010	250	3200	500	5/23/2004	5/23/2004	
Toluene	EPA 8260B	4E23010	250	37000	500	5/23/2004	5/23/2004	
o-Xylene	EPA 8260B	4E23010	250	6000	500	5/23/2004	5/23/2004	
m,p-Xylenes	EPA 8260B	4E23010	500	14000	500	5/23/2004	5/23/2004	
Xylenes, Total	EPA 8260B	4E23010	750	20000	500	5/23/2004	5/23/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E23010	2500	ND	500	5/23/2004	5/23/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E23010	2500	ND	500	5/23/2004	5/23/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E23010	2500	ND	500	5/23/2004	5/23/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E23010	500	ND	500	5/23/2004	5/23/2004	
tert-Butanol (TBA)	EPA 8260B	4E23010	12000	ND	500	5/23/2004	5/23/2004	
Surrogate: Dibromofluoromethane (80-120%)				118 %				
Surrogate: Toluene-d8 (80-120%)				110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				110 %				

Sample ID: INE0948-02 (MW-2-W-040513 - Water)

Reporting Units: ug/l								
Benzene	EPA 8260B	4E21016	0.50	92	1	5/21/2004	5/21/2004	
Ethylbenzene	EPA 8260B	4E21016	0.50	32	1	5/21/2004	5/21/2004	
Toluene	EPA 8260B	4E21016	0.50	54	1	5/21/2004	5/21/2004	
o-Xylene	EPA 8260B	4E21016	0.50	36	1	5/21/2004	5/21/2004	
m,p-Xylenes	EPA 8260B	4E21016	1.0	140	1	5/21/2004	5/21/2004	
Xylenes, Total	EPA 8260B	4E21016	1.5	170	1	5/21/2004	5/21/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/21/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/21/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/21/2004	M1
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/21/2004	M1
tert-Butanol (TBA)	EPA 8260B	4E21016	25	73	1	5/21/2004	5/21/2004	
Surrogate: Dibromofluoromethane (80-120%)				112 %				
Surrogate: Toluene-d8 (80-120%)				105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				

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Heather Bean For Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-03 (MW-3-W-040513 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4E22014	10	500	20	5/22/2004	5/22/2004	
Ethylbenzene	EPA 8260B	4E22014	10	640	20	5/22/2004	5/22/2004	
Toluene	EPA 8260B	4E22014	10	2500	20	5/22/2004	5/22/2004	
o-Xylene	EPA 8260B	4E22014	10	1000	20	5/22/2004	5/22/2004	
m,p-Xylenes	EPA 8260B	4E22014	20	2500	20	5/22/2004	5/22/2004	
Xylenes, Total	EPA 8260B	4E22014	30	3500	20	5/22/2004	5/22/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E22014	100	ND	20	5/22/2004	5/22/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E22014	100	ND	20	5/22/2004	5/22/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E22014	100	ND	20	5/22/2004	5/22/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E22014	20	ND	20	5/22/2004	5/22/2004	
tert-Butanol (TBA)	EPA 8260B	4E22014	500	ND	20	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				116 %				
Surrogate: Toluene-d8 (80-120%)				112 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				

Sample ID: INE0948-04 (MW-4-W-040513 - Water)

Reporting Units: ug/l								
Benzene	EPA 8260B	4E23010	20	370	40	5/23/2004	5/23/2004	
Ethylbenzene	EPA 8260B	4E23010	20	400	40	5/23/2004	5/23/2004	
Toluene	EPA 8260B	4E23010	20	2600	40	5/23/2004	5/23/2004	
o-Xylene	EPA 8260B	4E23010	20	690	40	5/23/2004	5/23/2004	
m,p-Xylenes	EPA 8260B	4E23010	40	1700	40	5/23/2004	5/23/2004	
Xylenes, Total	EPA 8260B	4E23010	60	2400	40	5/23/2004	5/23/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E23010	200	ND	40	5/23/2004	5/23/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E23010	200	ND	40	5/23/2004	5/23/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E23010	200	ND	40	5/23/2004	5/23/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E23010	40	ND	40	5/23/2004	5/23/2004	
tert-Butanol (TBA)	EPA 8260B	4E23010	1000	ND	40	5/23/2004	5/23/2004	
Surrogate: Dibromofluoromethane (80-120%)				116 %				
Surrogate: Toluene-d8 (80-120%)				110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				113 %				

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Heather Bean For Chris Roberts
Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-05 (MW-5-W-040513 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4E23008	200	6000	400	5/23/2004	5/23/2004	
Ethylbenzene	EPA 8260B	4E23008	200	1600	400	5/23/2004	5/23/2004	
Toluene	EPA 8260B	4E23008	200	20000	400	5/23/2004	5/23/2004	
o-Xylene	EPA 8260B	4E23008	200	3000	400	5/23/2004	5/23/2004	
m,p-Xylenes	EPA 8260B	4E23008	400	6900	400	5/23/2004	5/23/2004	
Xylenes, Total	EPA 8260B	4E23008	600	9900	400	5/23/2004	5/23/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E23008	2000	ND	400	5/23/2004	5/23/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E23008	2000	ND	400	5/23/2004	5/23/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E23008	2000	ND	400	5/23/2004	5/23/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E23008	400	ND	400	5/23/2004	5/23/2004	
tert-Butanol (TBA)	EPA 8260B	4E23008	10000	ND	400	5/23/2004	5/23/2004	
Surrogate: Dibromofluoromethane (80-120%)				114 %				
Surrogate: Toluene-d8 (80-120%)				105 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				104 %				

Sample ID: INE0948-06 (MW-6-W-040513 - Water)

Reporting Units: ug/l								
Benzene	EPA 8260B	4E22012	5.0	220	10	5/22/2004	5/22/2004	
Ethylbenzene	EPA 8260B	4E22012	5.0	110	10	5/22/2004	5/22/2004	
Toluene	EPA 8260B	4E22012	5.0	1000	10	5/22/2004	5/22/2004	
o-Xylene	EPA 8260B	4E22012	5.0	210	10	5/22/2004	5/22/2004	
m,p-Xylenes	EPA 8260B	4E22012	10	470	10	5/22/2004	5/22/2004	
Xylenes, Total	EPA 8260B	4E22012	15	680	10	5/22/2004	5/22/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E22012	50	ND	10	5/22/2004	5/22/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E22012	50	ND	10	5/22/2004	5/22/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E22012	50	ND	10	5/22/2004	5/22/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E22012	10	ND	10	5/22/2004	5/22/2004	
tert-Butanol (TBA)	EPA 8260B	4E22012	250	1000	10	5/22/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				114 %				
Surrogate: Toluene-d8 (80-120%)				108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				105 %				

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Heather Bean For Chris Roberts
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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04

Received: 05/17/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-07 (MW-7-W-040513 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4E23010	0.50	1.5	1	5/23/2004	5/23/2004	
Ethylbenzene	EPA 8260B	4E23010	0.50	0.61	1	5/23/2004	5/23/2004	
Toluene	EPA 8260B	4E23010	0.50	3.2	1	5/23/2004	5/23/2004	
o-Xylene	EPA 8260B	4E23010	0.50	ND	1	5/23/2004	5/23/2004	
m,p-Xylenes	EPA 8260B	4E23010	1.0	3.1	1	5/23/2004	5/23/2004	
Xylenes, Total	EPA 8260B	4E23010	1.5	3.5	1	5/23/2004	5/23/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E23010	5.0	ND	1	5/23/2004	5/23/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E23010	5.0	ND	1	5/23/2004	5/23/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E23010	5.0	ND	1	5/23/2004	5/23/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E23010	1.0	ND	1	5/23/2004	5/23/2004	
tert-Butanol (TBA)	EPA 8260B	4E23010	25	66	1	5/23/2004	5/23/2004	
Surrogate: Dibromofluoromethane (80-120%)				117 %				
Surrogate: Toluene-d8 (80-120%)				110 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				109 %				

Sample ID: INE0948-08 (MW-8-W-040513 - Water)

Reporting Units: ug/l								
Benzene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
Ethylbenzene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
Toluene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
o-Xylene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
m,p-Xylenes	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/22/2004	
Xylenes, Total	EPA 8260B	4E21016	1.5	ND	1	5/21/2004	5/22/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/22/2004	
tert-Butanol (TBA)	EPA 8260B	4E21016	25	ND	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				106 %				
Surrogate: Toluene-d8 (80-120%)				107 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04

Received: 05/17/04

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Method	Batch	Reporting Limit	Sample Result	Dilution Factor	Date Extracted	Date Analyzed	Data Qualifiers
Sample ID: INE0948-09 (MW-9-W-040513 - Water)								HS
Reporting Units: ug/l								
Benzene	EPA 8260B	4E24016	5.0	220	10	5/24/2004	5/24/2004	
Toluene	EPA 8260B	4E24016	5.0	740	10	5/24/2004	5/24/2004	
o-Xylene	EPA 8260B	4E24016	5.0	190	10	5/24/2004	5/24/2004	
m,p-Xylenes	EPA 8260B	4E24016	10	430	10	5/24/2004	5/24/2004	
Xylenes, Total	EPA 8260B	4E24016	15	620	10	5/24/2004	5/24/2004	
Surrogate: Dibromofluoromethane (80-120%)				101 %				
Surrogate: Toluene-d8 (80-120%)				102 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				101 %				
Sample ID: INE0948-09RE1 (MW-9-W-040513 - Water)								
Reporting Units: ug/l								
Ethylbenzene	EPA 8260B	4E21016	0.50	78	1	5/21/2004	5/22/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/22/2004	
tert-Butanol (TBA)	EPA 8260B	4E21016	25	590	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				108 %				
Surrogate: Toluene-d8 (80-120%)				104 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				104 %				
Sample ID: INE0948-10 (MW-10-W-040513 - Water)								
Reporting Units: ug/l								
Benzene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
Ethylbenzene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
Toluene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
o-Xylene	EPA 8260B	4E21016	0.50	ND	1	5/21/2004	5/22/2004	
m,p-Xylenes	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/22/2004	
Xylenes, Total	EPA 8260B	4E21016	1.5	ND	1	5/21/2004	5/22/2004	
Di-isopropyl Ether (DIPE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Ethyl tert-Butyl Ether (ETBE)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
tert-Amyl Methyl Ether (TAME)	EPA 8260B	4E21016	5.0	ND	1	5/21/2004	5/22/2004	
Methyl-tert-butyl Ether (MTBE)	EPA 8260B	4E21016	1.0	ND	1	5/21/2004	5/22/2004	
tert-Butanol (TBA)	EPA 8260B	4E21016	25	ND	1	5/21/2004	5/22/2004	
Surrogate: Dibromofluoromethane (80-120%)				108 %				
Surrogate: Toluene-d8 (80-120%)				108 %				
Surrogate: 4-Bromofluorobenzene (80-120%)				103 %				

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Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E21016 Extracted: 05/21/04										
Blank Analyzed: 05/21/04 (4E21016-BLK1)										
Volatile Fuel Hydrocarbons (C4-C12)	ND	500	ug/l							
Surrogate: Dibromofluoromethane	26.5		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.3		ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2		ug/l	25.0		105	80-120			
LCS Analyzed: 05/21/04 (4E21016-BS2)										
Volatile Fuel Hydrocarbons (C4-C12)	364	500	ug/l	500		73	65-120			M-3
Surrogate: Dibromofluoromethane	27.0		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.2		ug/l	25.0		105	80-120			
Batch: 4E22012 Extracted: 05/22/04										
Blank Analyzed: 05/22/04 (4E22012-BLK1)										
Volatile Fuel Hydrocarbons (C4-C12)	ND	500	ug/l							
Surrogate: Dibromofluoromethane	26.4		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.2		ug/l	25.0		101	80-120			
LCS Analyzed: 05/22/04 (4E22012-BS2)										
Volatile Fuel Hydrocarbons (C4-C12)	353	500	ug/l	500		71	65-120			
Surrogate: Dibromofluoromethane	26.4		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.9		ug/l	25.0		104	80-120			
Matrix Spike Analyzed: 05/22/04 (4E22012-MS1)										
					Source: INE0949-02					
Volatile Fuel Hydrocarbons (C4-C12)	840	500	ug/l	1120	28	72	60-135			
Surrogate: Dibromofluoromethane	26.7		ug/l	25.0		107	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.7		ug/l	25.0		103	80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E22012 Extracted: 05/22/04									
Matrix Spike Dup Analyzed: 05/22/04 (4E22012-MSD1)					Source: INE0949-02				
Volatile Fuel Hydrocarbons (C4-C12)	916	500	ug/l	1120	28	79 60-135	9	20	
Surrogate: Dibromofluoromethane	26.5		ug/l	25.0		106 80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107 80-120			
Surrogate: 4-Bromofluorobenzene	25.3		ug/l	25.0		101 80-120			
Batch: 4E22014 Extracted: 05/22/04									
Blank Analyzed: 05/22/04 (4E22014-BLK1)									
Volatile Fuel Hydrocarbons (C4-C12)	ND	500	ug/l						
Surrogate: Dibromofluoromethane	27.3		ug/l	25.0		109 80-120			
Surrogate: Toluene-d8	27.9		ug/l	25.0		112 80-120			
Surrogate: 4-Bromofluorobenzene	26.4		ug/l	25.0		106 80-120			
LCS Analyzed: 05/22/04 (4E22014-BS2)									
Volatile Fuel Hydrocarbons (C4-C12)	437	500	ug/l	500		87 65-120			
Surrogate: Dibromofluoromethane	28.3		ug/l	25.0		113 80-120			
Surrogate: Toluene-d8	28.0		ug/l	25.0		112 80-120			
Surrogate: 4-Bromofluorobenzene	28.4		ug/l	25.0		114 80-120			
Matrix Spike Analyzed: 05/22/04 (4E22014-MS1)					Source: INE0907-07				
Volatile Fuel Hydrocarbons (C4-C12)	1200	500	ug/l	1120	ND	107 60-135			
Surrogate: Dibromofluoromethane	27.8		ug/l	25.0		111 80-120			
Surrogate: Toluene-d8	28.0		ug/l	25.0		112 80-120			
Surrogate: 4-Bromofluorobenzene	28.4		ug/l	25.0		114 80-120			
Matrix Spike Dup Analyzed: 05/22/04 (4E22014-MSD1)					Source: INE0907-07				
Volatile Fuel Hydrocarbons (C4-C12)	1160	500	ug/l	1120	ND	104 60-135	3	20	
Surrogate: Dibromofluoromethane	29.2		ug/l	25.0		117 80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110 80-120			
Surrogate: 4-Bromofluorobenzene	28.8		ug/l	25.0		115 80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

VOLATILE FUEL HYDROCARBONS BY GC/MS

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E23010 Extracted: 05/23/04									
Blank Analyzed: 05/23/04 (4E23010-BLK1)									
Volatile Fuel Hydrocarbons (C4-C12)	ND	500	ug/l						
Surrogate: Dibromofluoromethane	27.5		ug/l	25.0		110 80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110 80-120			
Surrogate: 4-Bromofluorobenzene	26.0		ug/l	25.0		104 80-120			
LCS Analyzed: 05/23/04 (4E23010-BS2)									
Volatile Fuel Hydrocarbons (C4-C12)	416	500	ug/l	500		83 65-120			
Surrogate: Dibromofluoromethane	28.2		ug/l	25.0		113 80-120			
Surrogate: Toluene-d8	28.2		ug/l	25.0		113 80-120			
Surrogate: 4-Bromofluorobenzene	27.4		ug/l	25.0		110 80-120			
Matrix Spike Analyzed: 05/23/04 (4E23010-MS1)					Source: INE0949-04				
Volatile Fuel Hydrocarbons (C4-C12)	1010	500	ug/l	1120	ND	90 60-135			
Surrogate: Dibromofluoromethane	27.3		ug/l	25.0		109 80-120			
Surrogate: Toluene-d8	27.8		ug/l	25.0		111 80-120			
Surrogate: 4-Bromofluorobenzene	27.9		ug/l	25.0		112 80-120			
Matrix Spike Dup Analyzed: 05/23/04 (4E23010-MSD1)					Source: INE0949-04				
Volatile Fuel Hydrocarbons (C4-C12)	1070	500	ug/l	1120	ND	96 60-135	6	20	
Surrogate: Dibromofluoromethane	28.7		ug/l	25.0		115 80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110 80-120			
Surrogate: 4-Bromofluorobenzene	28.1		ug/l	25.0		112 80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E21016 Extracted: 05/21/04										
Blank Analyzed: 05/21/04 (4E21016-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	26.5		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.3		ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	26.2		ug/l	25.0		105	80-120			
LCS Analyzed: 05/21/04 (4E21016-BS1)										
Benzene	25.6	0.50	ug/l	25.0		102	70-120			M-3
Ethylbenzene	26.3	0.50	ug/l	25.0		105	80-120			
Toluene	26.1	0.50	ug/l	25.0		104	70-120			
o-Xylene	26.2	0.50	ug/l	25.0		105	75-125			
m,p-Xylenes	52.9	1.0	ug/l	50.0		106	70-120			
Xylenes, Total	79.0	1.5	ug/l	75.0		105	70-120			
Di-isopropyl Ether (DIPE)	24.4	5.0	ug/l	25.0		98	65-135			
Ethyl tert-Butyl Ether (ETBE)	24.2	5.0	ug/l	25.0		97	60-140			
tert-Amyl Methyl Ether (TAME)	24.5	5.0	ug/l	25.0		98	60-140			
Methyl-tert-butyl Ether (MTBE)	22.9	1.0	ug/l	25.0		92	55-145			
tert-Butanol (TBA)	138	25	ug/l	125		110	70-140			
Surrogate: Dibromofluoromethane	25.8		ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	26.9		ug/l	25.0		108	80-120			
Surrogate: 4-Bromofluorobenzene	25.2		ug/l	25.0		101	80-120			

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Project ID: Chevron 9-2795
Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E21016 Extracted: 05/21/04										
Matrix Spike Analyzed: 05/21/04 (4E21016-MS1)					Source: INE0948-02					
Ethylbenzene	55.3	0.50	ug/l	25.0	32	93	70-125			
Toluene	74.0	0.50	ug/l	25.0	54	80	65-120			
o-Xylene	62.1	0.50	ug/l	25.0	36	104	65-125			
m,p-Xylenes	175	1.0	ug/l	50.0	140	70	60-125			
Xylenes, Total	237	1.5	ug/l	75.0	170	89	60-135			
Di-isopropyl Ether (DIPE)	31.2	5.0	ug/l	25.0	ND	125	65-140			
Ethyl tert-Butyl Ether (ETBE)	34.1	5.0	ug/l	25.0	ND	136	60-140			
tert-Amyl Methyl Ether (TAME)	38.0	5.0	ug/l	25.0	ND	152	55-145			MI
Methyl-tert-butyl Ether (MTBE)	38.1	1.0	ug/l	25.0	ND	152	50-150			MI
tert-Butanol (TBA)	208	25	ug/l	125	73	108	65-145			
Surrogate: Dibromofluoromethane	26.9		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	26.6		ug/l	25.0		106	80-120			
Matrix Spike Dup Analyzed: 05/21/04 (4E21016-MSD1)					Source: INE0948-02					
Ethylbenzene	57.0	0.50	ug/l	25.0	32	100	70-125	3	20	
Toluene	76.3	0.50	ug/l	25.0	54	89	65-120	3	20	
o-Xylene	63.7	0.50	ug/l	25.0	36	111	65-125	3	20	
m,p-Xylenes	182	1.0	ug/l	50.0	140	84	60-125	4	25	
Xylenes, Total	246	1.5	ug/l	75.0	170	101	60-135	4	20	
Di-isopropyl Ether (DIPE)	30.8	5.0	ug/l	25.0	ND	123	65-140	1	25	
Ethyl tert-Butyl Ether (ETBE)	34.7	5.0	ug/l	25.0	ND	139	60-140	2	25	
tert-Amyl Methyl Ether (TAME)	38.3	5.0	ug/l	25.0	ND	153	55-145	1	25	MI
Methyl-tert-butyl Ether (MTBE)	38.2	1.0	ug/l	25.0	ND	153	50-150	0	25	MI
tert-Butanol (TBA)	202	25	ug/l	125	73	103	65-145	3	25	
Surrogate: Dibromofluoromethane	27.0		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	26.5		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.8		ug/l	25.0		107	80-120			

Del Mar Analytical, Irvine
Heather Bean For Chris Roberts
Project Manager



SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E22012 Extracted: 05/22/04										
Blank Analyzed: 05/22/04 (4E22012-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	26.4		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.2		ug/l	25.0		101	80-120			
LCS Analyzed: 05/22/04 (4E22012-BS1)										
Benzene	24.1	0.50	ug/l	25.0		96	70-120			
Ethylbenzene	24.9	0.50	ug/l	25.0		100	80-120			
Toluene	24.6	0.50	ug/l	25.0		98	70-120			
o-Xylene	24.9	0.50	ug/l	25.0		100	75-125			
m,p-Xylenes	49.6	1.0	ug/l	50.0		99	70-120			
Xylenes, Total	74.5	1.5	ug/l	75.0		99	70-120			
Di-isopropyl Ether (DIPE)	24.8	5.0	ug/l	25.0		99	65-135			
Ethyl tert-Butyl Ether (ETBE)	26.6	5.0	ug/l	25.0		106	60-140			
tert-Amyl Methyl Ether (TAME)	28.2	5.0	ug/l	25.0		113	60-140			
Methyl-tert-butyl Ether (MTBE)	27.4	1.0	ug/l	25.0		110	55-145			
tert-Butanol (TBA)	122	25	ug/l	125		98	70-140			
Surrogate: Dibromofluoromethane	26.3		ug/l	25.0		105	80-120			
Surrogate: Toluene-d8	26.4		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	26.2		ug/l	25.0		105	80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD RPD	RPD Limit	Data Qualifiers
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Batch: 4E22012 Extracted: 05/22/04

Matrix Spike Analyzed: 05/22/04 (4E22012-MS1)

Source: INE0949-02

Benzene	23.6	0.50	ug/l	25.0	ND	94	70-120		
Ethylbenzene	24.2	0.50	ug/l	25.0	ND	97	70-125		
Toluene	24.0	0.50	ug/l	25.0	ND	96	65-120		
o-Xylene	23.9	0.50	ug/l	25.0	ND	96	65-125		
m,p-Xylenes	47.0	1.0	ug/l	50.0	ND	94	60-125		
Xylenes, Total	71.0	1.5	ug/l	75.0	ND	95	60-135		
Di-isopropyl Ether (DIPE)	23.5	5.0	ug/l	25.0	ND	94	65-140		
Ethyl tert-Butyl Ether (ETBE)	24.7	5.0	ug/l	25.0	ND	99	60-140		
tert-Amyl Methyl Ether (TAME)	25.4	5.0	ug/l	25.0	ND	102	55-145		
Methyl-tert-butyl Ether (MTBE)	24.7	1.0	ug/l	25.0	0.59	96	50-150		
tert-Butanol (TBA)	132	25	ug/l	125	ND	106	65-145		
Surrogate: Dibromofluoromethane	26.7		ug/l	25.0		107	80-120		
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120		
Surrogate: 4-Bromofluorobenzene	25.7		ug/l	25.0		103	80-120		

Matrix Spike Dup Analyzed: 05/22/04 (4E22012-MSD1)

Source: INE0949-02

Benzene	25.2	0.50	ug/l	25.0	ND	101	70-120	7	20
Ethylbenzene	25.7	0.50	ug/l	25.0	ND	103	70-125	6	20
Toluene	25.8	0.50	ug/l	25.0	ND	103	65-120	7	20
o-Xylene	25.8	0.50	ug/l	25.0	ND	103	65-125	8	20
m,p-Xylenes	51.1	1.0	ug/l	50.0	ND	102	60-125	8	25
Xylenes, Total	76.9	1.5	ug/l	75.0	ND	103	60-135	8	20
Di-isopropyl Ether (DIPE)	25.9	5.0	ug/l	25.0	ND	104	65-140	10	25
Ethyl tert-Butyl Ether (ETBE)	26.9	5.0	ug/l	25.0	ND	108	60-140	9	25
tert-Amyl Methyl Ether (TAME)	28.1	5.0	ug/l	25.0	ND	112	55-145	10	25
Methyl-tert-butyl Ether (MTBE)	27.9	1.0	ug/l	25.0	0.59	109	50-150	12	25
tert-Butanol (TBA)	138	25	ug/l	125	ND	110	65-145	4	25
Surrogate: Dibromofluoromethane	26.5		ug/l	25.0		106	80-120		
Surrogate: Toluene-d8	26.8		ug/l	25.0		107	80-120		
Surrogate: 4-Bromofluorobenzene	25.3		ug/l	25.0		101	80-120		

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04

Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E22014 Extracted: 05/22/04										
Blank Analyzed: 05/22/04 (4E22014-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	27.3		ug/l	25.0		109	80-120			
Surrogate: Toluene-d8	27.9		ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	26.4		ug/l	25.0		106	80-120			
LCS Analyzed: 05/22/04 (4E22014-BS1)										
Benzene	22.8	0.50	ug/l	25.0		91	70-120			
Ethylbenzene	25.3	0.50	ug/l	25.0		101	80-120			
Toluene	24.5	0.50	ug/l	25.0		98	70-120			
o-Xylene	24.2	0.50	ug/l	25.0		97	75-125			
m,p-Xylenes	49.3	1.0	ug/l	50.0		99	70-120			
Xylenes, Total	73.5	1.5	ug/l	75.0		98	70-120			
Di-isopropyl Ether (DIPE)	26.2	5.0	ug/l	25.0		105	65-135			
Ethyl tert-Butyl Ether (ETBE)	26.8	5.0	ug/l	25.0		107	60-140			
tert-Amyl Methyl Ether (TAME)	26.2	5.0	ug/l	25.0		105	60-140			
Methyl-tert-butyl Ether (MTBE)	25.6	1.0	ug/l	25.0		102	55-145			
tert-Butanol (TBA)	123	25	ug/l	125		98	70-140			
Surrogate: Dibromofluoromethane	28.2		ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	28.2		ug/l	25.0		113	80-120			
Surrogate: 4-Bromofluorobenzene	28.4		ug/l	25.0		114	80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
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Batch: 4E22014 Extracted: 05/22/04

Matrix Spike Analyzed: 05/22/04 (4E22014-MS1)

Source: INE0907-07

Benzene	25.1	0.50	ug/l	25.0	ND	100	70-120			
Ethylbenzene	28.7	0.50	ug/l	25.0	ND	115	70-125			
Toluene	27.4	0.50	ug/l	25.0	ND	110	65-120			
o-Xylene	27.6	0.50	ug/l	25.0	ND	110	65-125			
m,p-Xylenes	54.9	1.0	ug/l	50.0	ND	110	60-125			
Xylenes, Total	82.4	1.5	ug/l	75.0	ND	110	60-135			
Di-isopropyl Ether (DIPE)	27.3	5.0	ug/l	25.0	ND	109	65-140			
Ethyl tert-Butyl Ether (ETBE)	26.0	5.0	ug/l	25.0	ND	104	60-140			
tert-Amyl Methyl Ether (TAME)	23.9	5.0	ug/l	25.0	ND	96	55-145			
Methyl-tert-butyl Ether (MTBE)	22.7	1.0	ug/l	25.0	ND	91	50-150			
tert-Butanol (TBA)	156	25	ug/l	125	ND	125	65-145			
Surrogate: Dibromofluoromethane	27.8		ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	28.0		ug/l	25.0		112	80-120			
Surrogate: 4-Bromofluorobenzene	28.4		ug/l	25.0		114	80-120			

Matrix Spike Dup Analyzed: 05/22/04 (4E22014-MSD1)

Source: INE0907-07

Benzene	23.4	0.50	ug/l	25.0	ND	94	70-120	7	20	
Ethylbenzene	26.0	0.50	ug/l	25.0	ND	104	70-125	10	20	
Toluene	25.2	0.50	ug/l	25.0	ND	101	65-120	8	20	
o-Xylene	24.9	0.50	ug/l	25.0	ND	100	65-125	10	20	
m,p-Xylenes	49.7	1.0	ug/l	50.0	ND	99	60-125	10	25	
Xylenes, Total	74.5	1.5	ug/l	75.0	ND	99	60-135	10	20	
Di-isopropyl Ether (DIPE)	27.5	5.0	ug/l	25.0	ND	110	65-140	1	25	
Ethyl tert-Butyl Ether (ETBE)	28.6	5.0	ug/l	25.0	ND	114	60-140	10	25	
tert-Amyl Methyl Ether (TAME)	28.2	5.0	ug/l	25.0	ND	113	55-145	17	25	
Methyl-tert-butyl Ether (MTBE)	28.2	1.0	ug/l	25.0	ND	113	50-150	22	25	
tert-Butanol (TBA)	120	25	ug/l	125	ND	96	65-145	26	25	R
Surrogate: Dibromofluoromethane	29.2		ug/l	25.0		117	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	28.8		ug/l	25.0		115	80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E23008 Extracted: 05/23/04										
Blank Analyzed: 05/23/04 (4E23008-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	26.4		ug/l	25.0		106	80-120			
Surrogate: Toluene-d8	26.6		ug/l	25.0		106	80-120			
Surrogate: 4-Bromofluorobenzene	25.7		ug/l	25.0		103	80-120			
LCS Analyzed: 05/23/04 (4E23008-BS1)										
Benzene	23.0	0.50	ug/l	25.0		92	70-120			
Ethylbenzene	23.9	0.50	ug/l	25.0		96	80-120			
Toluene	23.4	0.50	ug/l	25.0		94	70-120			
o-Xylene	24.2	0.50	ug/l	25.0		97	75-125			
m,p-Xylenes	48.1	1.0	ug/l	50.0		96	70-120			
Xylenes, Total	72.3	1.5	ug/l	75.0		96	70-120			
Di-isopropyl Ether (DIPE)	25.6	5.0	ug/l	25.0		102	65-135			
Ethyl tert-Butyl Ether (ETBE)	27.7	5.0	ug/l	25.0		111	60-140			
tert-Amyl Methyl Ether (TAME)	29.4	5.0	ug/l	25.0		118	60-140			
Methyl-tert-butyl Ether (MTBE)	29.2	1.0	ug/l	25.0		117	55-145			
tert-Butanol (TBA)	115	25	ug/l	125		92	70-140			
Surrogate: Dibromofluoromethane	27.7		ug/l	25.0		111	80-120			
Surrogate: Toluene-d8	26.3		ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	25.6		ug/l	25.0		102	80-120			

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Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04

Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Data Qualifiers
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Batch: 4E23008 Extracted: 05/23/04

Matrix Spike Analyzed: 05/23/04 (4E23008-MS1)

Source: INE0923-02

Benzene	24.0	0.50	ug/l	25.0	ND	96	70-120			
Ethylbenzene	26.1	0.50	ug/l	25.0	ND	104	70-125			
Toluene	24.4	0.50	ug/l	25.0	ND	98	65-120			
o-Xylene	25.7	0.50	ug/l	25.0	ND	103	65-125			
m,p-Xylenes	58.1	1.0	ug/l	50.0	ND	116	60-125			
Xylenes, Total	83.8	1.5	ug/l	75.0	ND	112	60-135			
Di-isopropyl Ether (DIPE)	19.2	5.0	ug/l	25.0	ND	77	65-140			
Ethyl tert-Butyl Ether (ETBE)	17.0	5.0	ug/l	25.0	ND	68	60-140			
tert-Amyl Methyl Ether (TAME)	16.0	5.0	ug/l	25.0	ND	64	55-145			
Methyl-tert-butyl Ether (MTBE)	17.1	1.0	ug/l	25.0	3.0	56	50-150			
tert-Butanol (TBA)	88.8	25	ug/l	125	ND	71	65-145			
Surrogate: Dibromofluoromethane	24.2		ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	26.2		ug/l	25.0		105	80-120			
Surrogate: 4-Bromofluorobenzene	24.0		ug/l	25.0		96	80-120			

Matrix Spike Dup Analyzed: 05/23/04 (4E23008-MSD1)

Source: INE0923-02

Benzene	25.6	0.50	ug/l	25.0	ND	102	70-120	6	20	
Ethylbenzene	26.3	0.50	ug/l	25.0	ND	105	70-125	1	20	
Toluene	26.0	0.50	ug/l	25.0	ND	104	65-120	6	20	
o-Xylene	26.6	0.50	ug/l	25.0	ND	106	65-125	3	20	
m,p-Xylenes	52.0	1.0	ug/l	50.0	ND	104	60-125	11	25	
Xylenes, Total	78.6	1.5	ug/l	75.0	ND	105	60-135	6	20	
Di-isopropyl Ether (DIPE)	26.3	5.0	ug/l	25.0	ND	105	65-140	31	25	R
Ethyl tert-Butyl Ether (ETBE)	28.1	5.0	ug/l	25.0	ND	112	60-140	49	25	R
tert-Amyl Methyl Ether (TAME)	28.9	5.0	ug/l	25.0	ND	116	55-145	57	25	R
Methyl-tert-butyl Ether (MTBE)	30.7	1.0	ug/l	25.0	3.0	111	50-150	57	25	R
tert-Butanol (TBA)	120	25	ug/l	125	ND	96	65-145	30	25	R
Surrogate: Dibromofluoromethane	26.9		ug/l	25.0		108	80-120			
Surrogate: Toluene-d8	26.7		ug/l	25.0		107	80-120			
Surrogate: 4-Bromofluorobenzene	25.7		ug/l	25.0		103	80-120			

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch: 4E23010 Extracted: 05/23/04										
Blank Analyzed: 05/23/04 (4E23010-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	27.5		ug/l	25.0		110	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	26.0		ug/l	25.0		104	80-120			
LCS Analyzed: 05/23/04 (4E23010-BS1)										
Benzene	21.6	0.50	ug/l	25.0		86	70-120			
Ethylbenzene	24.2	0.50	ug/l	25.0		97	80-120			
Toluene	23.0	0.50	ug/l	25.0		92	70-120			
o-Xylene	23.1	0.50	ug/l	25.0		92	75-125			
m,p-Xylenes	46.7	1.0	ug/l	50.0		93	70-120			
Xylenes, Total	69.8	1.5	ug/l	75.0		93	70-120			
Di-isopropyl Ether (DIPE)	24.8	5.0	ug/l	25.0		99	65-135			
Ethyl tert-Butyl Ether (ETBE)	25.5	5.0	ug/l	25.0		102	60-140			
tert-Amyl Methyl Ether (TAME)	24.9	5.0	ug/l	25.0		100	60-140			
Methyl-tert-butyl Ether (MTBE)	24.2	1.0	ug/l	25.0		97	55-145			
tert-Butanol (TBA)	119	25	ug/l	125		95	70-140			
Surrogate: Dibromofluoromethane	28.2		ug/l	25.0		113	80-120			
Surrogate: Toluene-d8	27.8		ug/l	25.0		111	80-120			
Surrogate: 4-Bromofluorobenzene	28.2		ug/l	25.0		113	80-120			

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC Limits	RPD	RPD Limit	Data Qualifiers
---------	--------	-----------------	-------	-------------	---------------	------------------	-----	-----------	-----------------

Batch: 4E23010 Extracted: 05/23/04

Matrix Spike Analyzed: 05/23/04 (4E23010-MS1)

Source: INE0949-04

Benzene	21.6	0.50	ug/l	25.0	0.58	84	70-120		
Ethylbenzene	26.8	0.50	ug/l	25.0	2.1	99	70-125		
Toluene	22.9	0.50	ug/l	25.0	ND	92	65-120		
o-Xylene	23.4	0.50	ug/l	25.0	ND	94	65-125		
m,p-Xylenes	47.2	1.0	ug/l	50.0	ND	94	60-125		
Xylenes, Total	70.6	1.5	ug/l	75.0	ND	94	60-135		
Di-isopropyl Ether (DIPE)	23.0	5.0	ug/l	25.0	ND	92	65-140		
Ethyl tert-Butyl Ether (ETBE)	22.2	5.0	ug/l	25.0	ND	89	60-140		
tert-Amyl Methyl Ether (TAME)	20.1	5.0	ug/l	25.0	ND	80	55-145		
Methyl-tert-butyl Ether (MTBE)	20.7	1.0	ug/l	25.0	2.3	74	50-150		
tert-Butanol (TBA)	126	25	ug/l	125	ND	101	65-145		
Surrogate: Dibromofluoromethane	27.3		ug/l	25.0		109	80-120		
Surrogate: Toluene-d8	27.8		ug/l	25.0		111	80-120		
Surrogate: 4-Bromofluorobenzene	27.9		ug/l	25.0		112	80-120		

Matrix Spike Dup Analyzed: 05/23/04 (4E23010-MSD1)

Source: INE0949-04

Benzene	21.7	0.50	ug/l	25.0	0.58	84	70-120	1	20	
Ethylbenzene	25.8	0.50	ug/l	25.0	2.1	95	70-125	4	20	
Toluene	22.8	0.50	ug/l	25.0	ND	91	65-120	0	20	
o-Xylene	22.6	0.50	ug/l	25.0	ND	90	65-125	3	20	
m,p-Xylenes	45.4	1.0	ug/l	50.0	ND	91	60-125	4	25	
Xylenes, Total	68.0	1.5	ug/l	75.0	ND	91	60-135	4	20	
Di-isopropyl Ether (DIPE)	25.0	5.0	ug/l	25.0	ND	100	65-140	8	25	
Ethyl tert-Butyl Ether (ETBE)	26.0	5.0	ug/l	25.0	ND	104	60-140	16	25	
tert-Amyl Methyl Ether (TAME)	26.0	5.0	ug/l	25.0	ND	104	55-145	26	25	R
Methyl-tert-butyl Ether (MTBE)	27.9	1.0	ug/l	25.0	2.3	102	50-150	30	25	R
tert-Butanol (TBA)	120	25	ug/l	125	ND	96	65-145	5	25	
Surrogate: Dibromofluoromethane	28.7		ug/l	25.0		115	80-120			
Surrogate: Toluene-d8	27.6		ug/l	25.0		110	80-120			
Surrogate: 4-Bromofluorobenzene	28.1		ug/l	25.0		112	80-120			

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Project Manager

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SECOR-San Diego/ChevronTexaco
2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 4E24016 Extracted: 05/24/04										
Blank Analyzed: 05/24/04 (4E24016-BLK1)										
Benzene	ND	0.50	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
m,p-Xylenes	ND	1.0	ug/l							
Xylenes, Total	ND	1.5	ug/l							
Di-isopropyl Ether (DIPE)	ND	5.0	ug/l							
Ethyl tert-Butyl Ether (ETBE)	ND	5.0	ug/l							
tert-Amyl Methyl Ether (TAME)	ND	5.0	ug/l							
Methyl-tert-butyl Ether (MTBE)	ND	1.0	ug/l							
tert-Butanol (TBA)	ND	25	ug/l							
Surrogate: Dibromofluoromethane	24.2		ug/l	25.0		97	80-120			
Surrogate: Toluene-d8	24.9		ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	24.4		ug/l	25.0		98	80-120			
LCS Analyzed: 05/24/04 (4E24016-BS1)										
Benzene	25.1	0.50	ug/l	25.0		100	70-120			
Ethylbenzene	26.2	0.50	ug/l	25.0		105	80-120			
Toluene	25.4	0.50	ug/l	25.0		102	70-120			
o-Xylene	25.5	0.50	ug/l	25.0		102	75-125			
m,p-Xylenes	52.3	1.0	ug/l	50.0		105	70-120			
Xylenes, Total	77.8	1.5	ug/l	75.0		104	70-120			
Di-isopropyl Ether (DIPE)	24.6	5.0	ug/l	25.0		98	65-135			
Ethyl tert-Butyl Ether (ETBE)	24.2	5.0	ug/l	25.0		97	60-140			
tert-Amyl Methyl Ether (TAME)	24.7	5.0	ug/l	25.0		99	60-140			
Methyl-tert-butyl Ether (MTBE)	24.6	1.0	ug/l	25.0		98	55-145			M-3
tert-Butanol (TBA)	140	25	ug/l	125		112	70-140			
Surrogate: Dibromofluoromethane	25.3		ug/l	25.0		101	80-120			
Surrogate: Toluene-d8	25.1		ug/l	25.0		100	80-120			
Surrogate: 4-Bromofluorobenzene	25.0		ug/l	25.0		100	80-120			

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SECOR-San Diego/ChevronTexaco
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San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

METHOD BLANK/QC DATA

BTEX/OXYGENATES by GC/MS (EPA 8260B)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limit	RPD	RPD Limit	Data Qualifiers
Batch: 4E24016 Extracted: 05/24/04										
Matrix Spike Analyzed: 05/24/04 (4E24016-MS1)					Source: INE0949-01					
Benzene	25.2	0.50	ug/l	25.0	ND	101	70-120			
Ethylbenzene	26.0	0.50	ug/l	25.0	ND	104	70-125			
Toluene	25.6	0.50	ug/l	25.0	ND	102	65-120			
o-Xylene	26.0	0.50	ug/l	25.0	ND	104	65-125			
m,p-Xylenes	52.2	1.0	ug/l	50.0	ND	104	60-125			
Xylenes, Total	78.2	1.5	ug/l	75.0	ND	104	60-135			
Di-isopropyl Ether (DIPE)	25.6	5.0	ug/l	25.0	ND	102	65-140			
Ethyl tert-Butyl Ether (ETBE)	25.8	5.0	ug/l	25.0	ND	103	60-140			
tert-Amyl Methyl Ether (TAME)	28.1	5.0	ug/l	25.0	ND	112	55-145			
tert-Butanol (TBA)	255	25	ug/l	125	110	116	65-145			
Surrogate: Dibromofluoromethane	25.6		ug/l	25.0		102	80-120			
Surrogate: Toluene-d8	25.3		ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.8		ug/l	25.0		103	80-120			
Matrix Spike Dup Analyzed: 05/24/04 (4E24016-MSD1)					Source: INE0949-01					
Benzene	25.8	0.50	ug/l	25.0	ND	103	70-120	2	20	
Ethylbenzene	26.7	0.50	ug/l	25.0	ND	107	70-125	3	20	
Toluene	26.3	0.50	ug/l	25.0	ND	105	65-120	3	20	
o-Xylene	26.4	0.50	ug/l	25.0	ND	106	65-125	2	20	
m,p-Xylenes	53.3	1.0	ug/l	50.0	ND	107	60-125	2	25	
Xylenes, Total	79.7	1.5	ug/l	75.0	ND	106	60-135	2	20	
Di-isopropyl Ether (DIPE)	26.6	5.0	ug/l	25.0	ND	106	65-140	4	25	
Ethyl tert-Butyl Ether (ETBE)	26.5	5.0	ug/l	25.0	ND	106	60-140	3	25	
tert-Amyl Methyl Ether (TAME)	28.6	5.0	ug/l	25.0	ND	114	55-145	2	25	
tert-Butanol (TBA)	268	25	ug/l	125	110	126	65-145	5	25	
Surrogate: Dibromofluoromethane	25.8		ug/l	25.0		103	80-120			
Surrogate: Toluene-d8	25.2		ug/l	25.0		101	80-120			
Surrogate: 4-Bromofluorobenzene	25.6		ug/l	25.0		102	80-120			

Del Mar Analytical, Irvine
Heather Bean For Chris Roberts
Project Manager

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2655 Camino del Rio North, Suite 302
San Diego, CA 92108
Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

DATA QUALIFIERS AND DEFINITIONS

HS HS = Sample container contained headspace.
M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).
M-3 Results exceeded the linear range in the MS/MSD and therefore are not available for reporting. The batch was accepted based on acceptable recovery in the Blank Spike (LCS).
R The RPD exceeded the method control limit due to sample matrix effects. The individual analyte QA/QC recoveries, however, were within acceptance limits.
ND Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified.
RPD Relative Percent Difference

ADDITIONAL COMMENTS

For 8260 analyses:

Due to the high water solubility of alcohols and ketones, the calibration criteria for these compounds is <30% RSD. The average % RSD of all compounds in the calibration is 15%, in accordance with EPA methods.

For Volatile Fuel Hydrocarbons (C4-C12):

Volatile Fuel Hydrocarbons (C4-C12) are quantitated against a gasoline standard. Quantitation begins immediately before TBA-d9.



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Attention: Maurice Baron

Project ID: Chevron 9-2795

Report Number: INE0948

Sampled: 05/13/04
Received: 05/17/04

Certification Summary

Del Mar Analytical, Irvine

Method	Matrix	NELAP	CA
EPA 8260B	Water	X	X
TPH by GC/MS	Water	X	X

NV and NELAP provide analyte specific accreditations. Analyte specific information for Del Mar Analytical may be obtained by contacting the laboratory or visiting our website at www.dmalabs.com.

Del Mar Analytical, Irvine
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Project Manager

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INT-0448

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 145 S. State College Boulevard ■ Brea, CA 92822-2292 COC 1 of 1

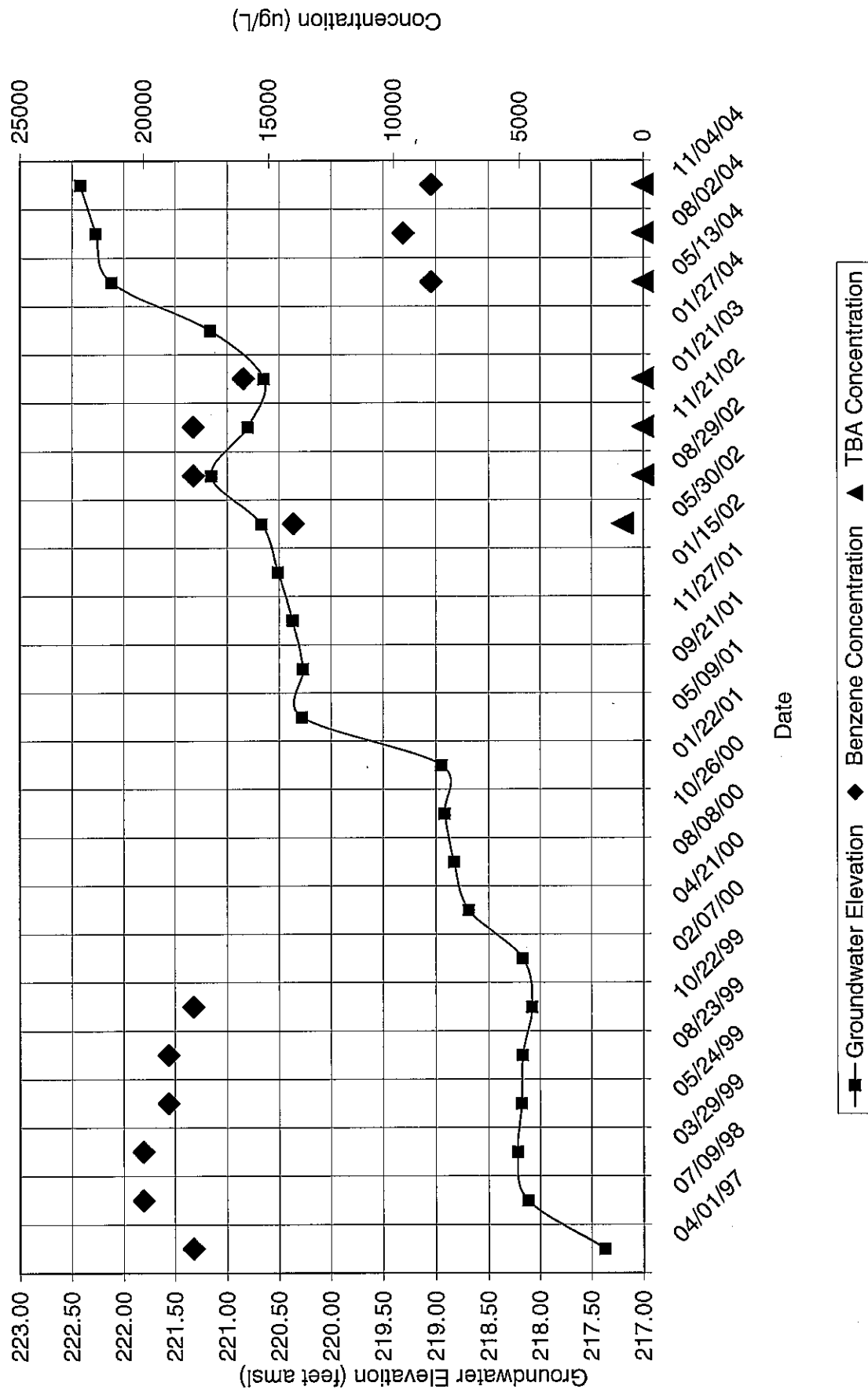
Chevron Site Global ID: <u>IO607399173</u>				Chevron Consultant: <u>SECOR International, Inc.</u>				ANALYSES REQUIRED										Special Instructions	
Chevron Site Number <u>9-2795</u>				Address: <u>2301 Leghorn, Mountain View, CA 94043</u>															
Chevron Site Address: <u>6051 El Tordo, Rancho Santa Fe</u>				Consultant Contact: <u>Maurice Baron</u>															
				Consultant Phone No. <u>(650) 691-0131</u>															
				Consultant Project No. <u>MTCH.92795.08</u>															
Chevron PM: <u>SECOR: c/o Madeline Montilla</u>				Sampling Company: <u>BISI</u>															
<u>2301 Leghorn, Mountain View, CA 94043</u>				Sampled By (Print): <u>Chris Gordon</u>															
Chevron MT PM Phone No.: <u>(650) 691-0131 x 235</u>				Sampler Signature: <u>CE gl</u>														Temp. Blank Check Time: <u>0700</u> <u>12</u>	
																		Temp. <u>1600</u> <u>12</u>	
MT Job No: <u>MTCH.92795.08</u>				EDF Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No															
Chevron Service Code: <u>ZZ02800</u>				Lancaster Laboratories															
X Management Transfer - SO CA Portfolio Job				<input type="checkbox"/> Irvine, CA															
E-Construction/Retail Job or				<input type="checkbox"/> Colton, CA															
E-Retail and Terminal Business Unit (RTBU) Job				Lab Contact: <u>Teresa Cunningham</u>															
				Phone No: <u>(949) 261-1022</u>															
				<input type="checkbox"/> (909) 370-4667															
NOTE: THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.				SAMPLE ID															
Field Point Name	Matrix	Top Depth	Date (yy/mm/dd)	Sample Time	Container Type	# of Containers	Preservation	EPA 8015B GRO <input type="checkbox"/> DRO <input type="checkbox"/> ORO <input type="checkbox"/> TPHd <input type="checkbox"/> HC SCREEN <input type="checkbox"/>	EPA 8021B BTEX <input type="checkbox"/> MTBE <input type="checkbox"/>	EPA 8260B PH-G-8 <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> HVO <input type="checkbox"/>	EPA 6010 CA, FE, K, MG, MN, NA <input type="checkbox"/>	EPA 6010/7000 TITLE 22 METALS <input type="checkbox"/> TLE <input type="checkbox"/> STLC <input type="checkbox"/>	EPA 310.1 ALKALINITY <input type="checkbox"/>	SM 2510B SPECIFIC CONDUCTIVITY <input type="checkbox"/>	EPA 418.1 TRPH <input type="checkbox"/>	EPA 413.101L/GREASES <input type="checkbox"/>	Special Instructions		
MW-1	W		040515	1701	WGA	4	HCl			X									
MW-2				1415						X									
MW-3				1544						X									
MW-4				1523						X									
MW-5				1608						X									
MW-6				1710						X									
MW-7				1043						X									
MW-8				955						X									
MW-9				1562						X									
MW-10				901						X									
Relinquished By: <u>CE gl</u>	Company: <u>BTS</u>	Date/Time: <u>5/13/04</u>	Relinquished To: <u>SECOR</u>	Company: <u>SECOR</u>	Date/Time: <u>5/17/04 1340</u>	Turnaround Time: <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 hours <input type="checkbox"/> Other <input type="checkbox"/>													Sample Integrity: (Check by lab on arrival) <input checked="" type="checkbox"/> Intact: <input type="checkbox"/> On Ice: <input checked="" type="checkbox"/> Temp: <u>5°</u>

APPENDIX G

Benzene and TBA Concentration Versus Time Hydrographs

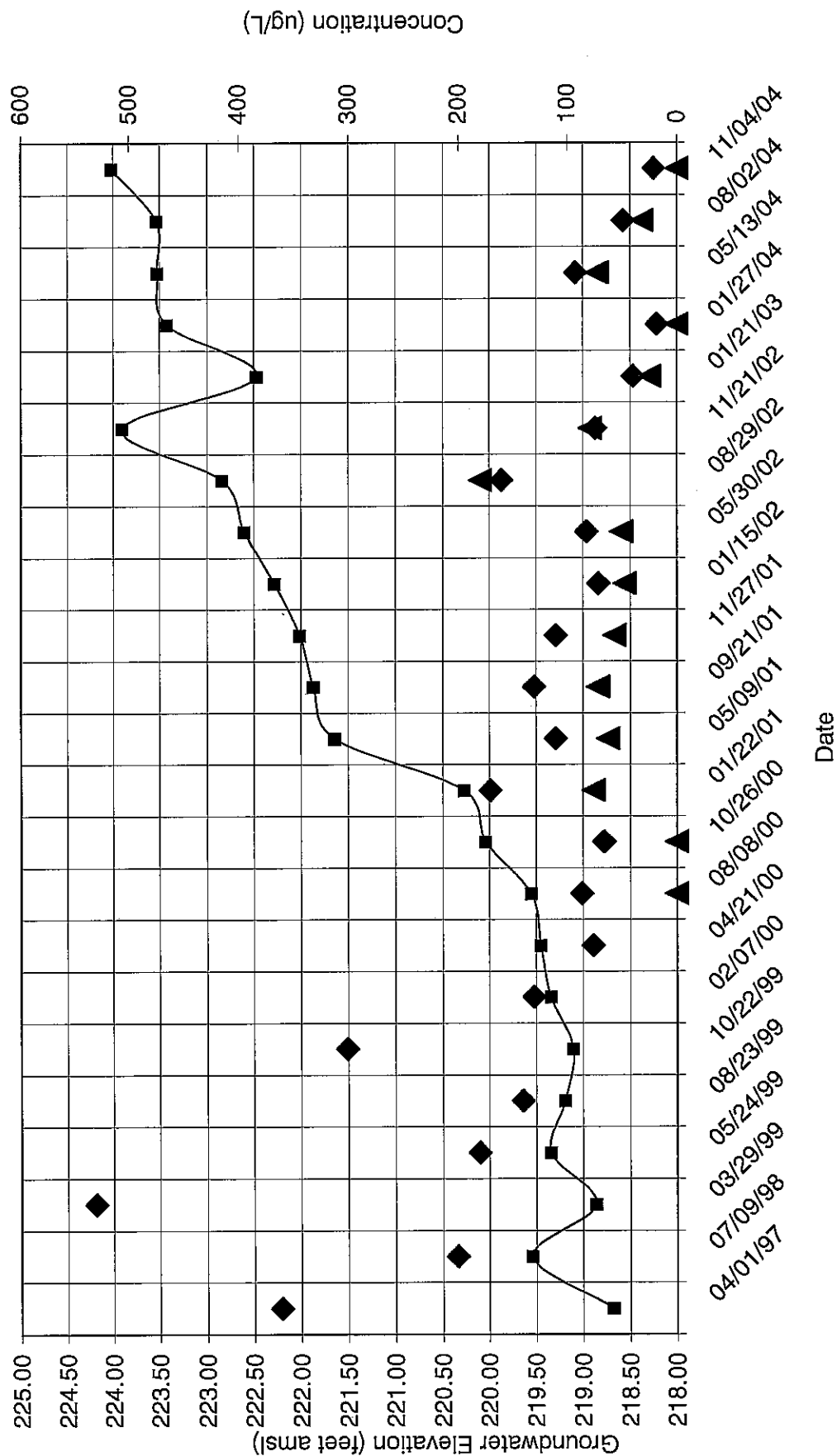
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Hydrograph for MW-1
Data Series from 1997 to Present



Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

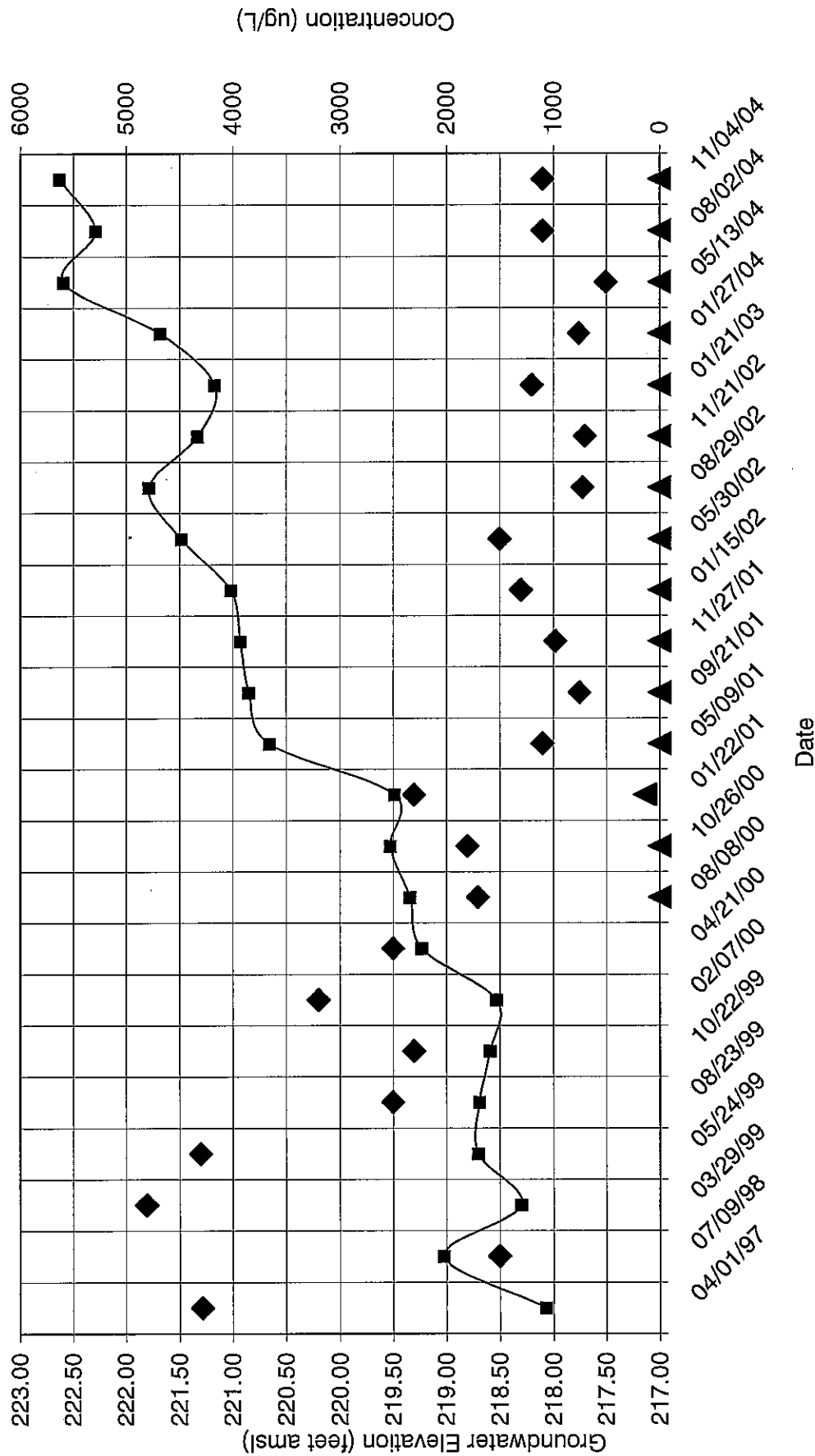
Hydrograph for MW-2
Data Series from 1997 to Present



—■— Groundwater Elevation ◆ Benzene Concentration ▲ TBA Concentration

Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

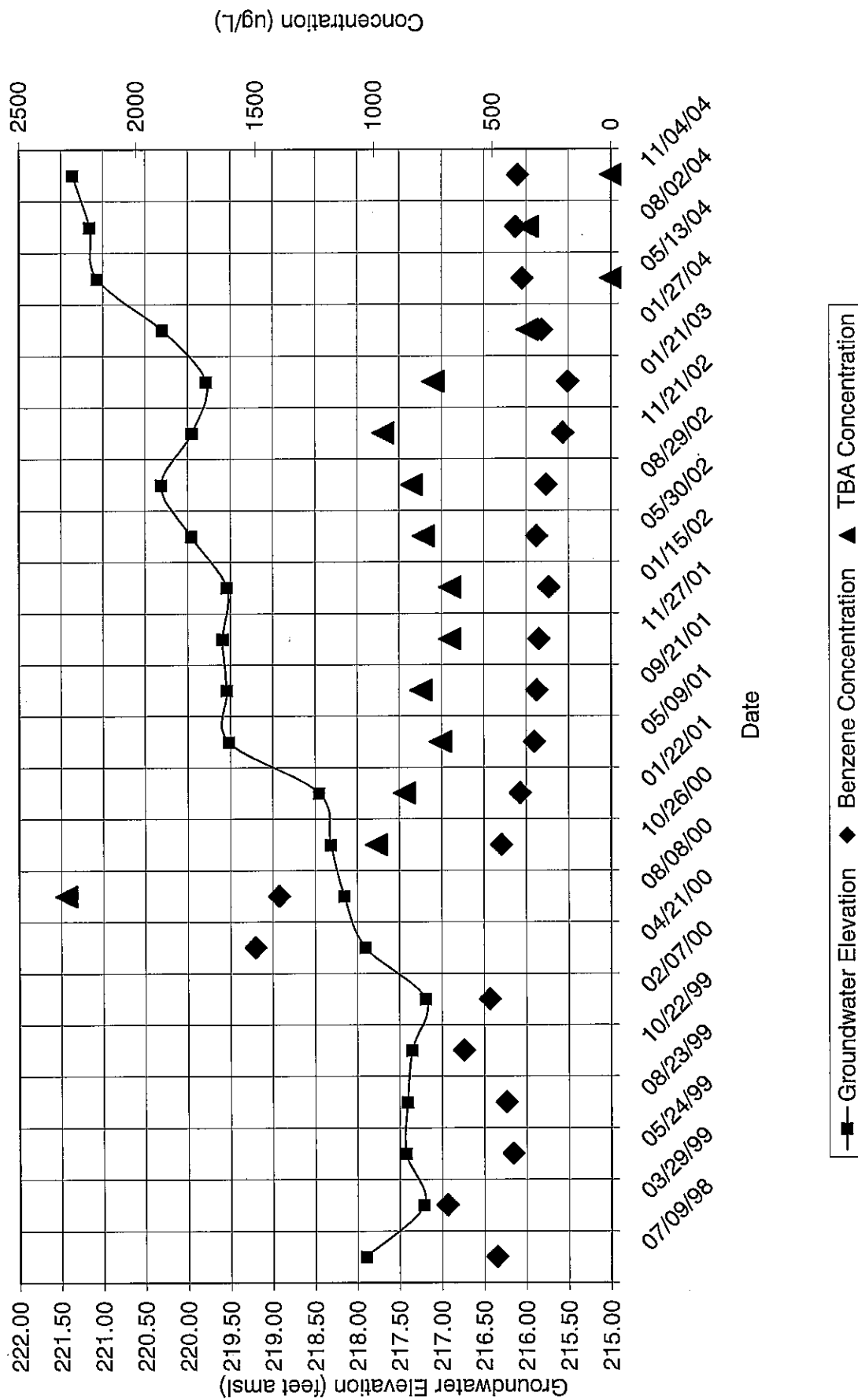
Hydrograph for MW-3
Data Series from 1997 to Present



—■— Groundwater Elevation ◆ Benzene Concentration ▲ TBA Concentration

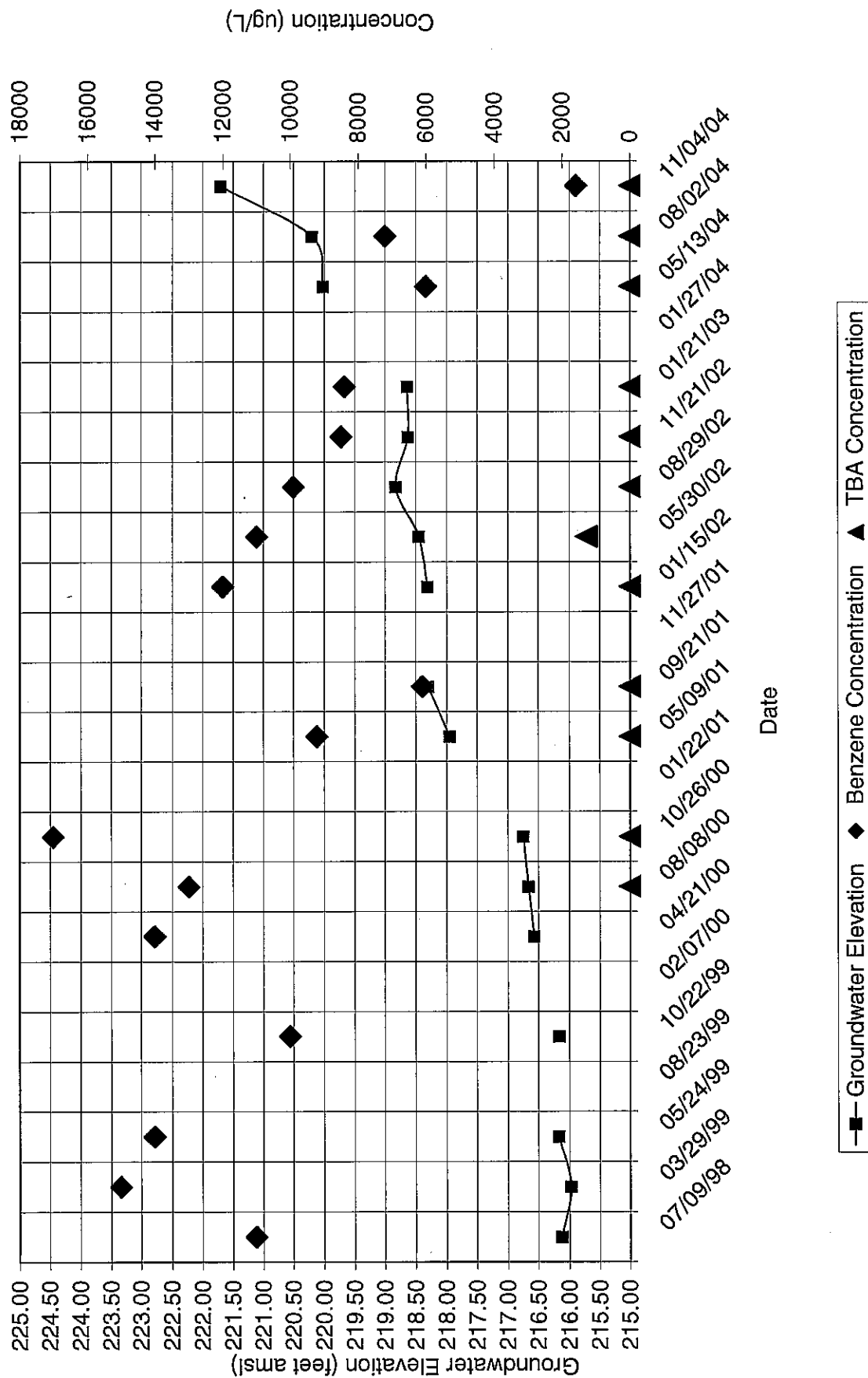
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Hydrograph for MW-4
Data Series from 1998 to Present



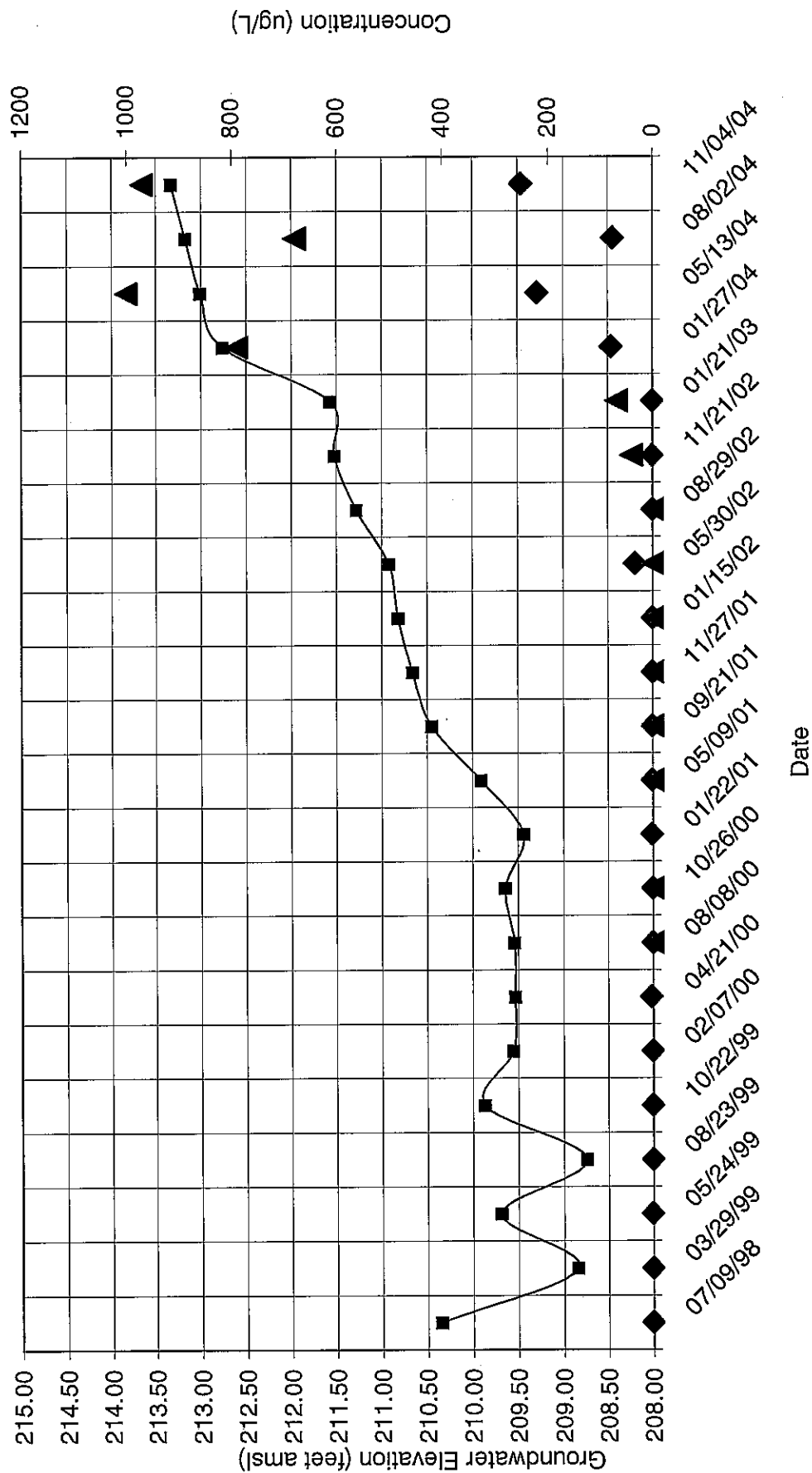
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Hydrograph for MW-5
Data Series from 1998 to Present



Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

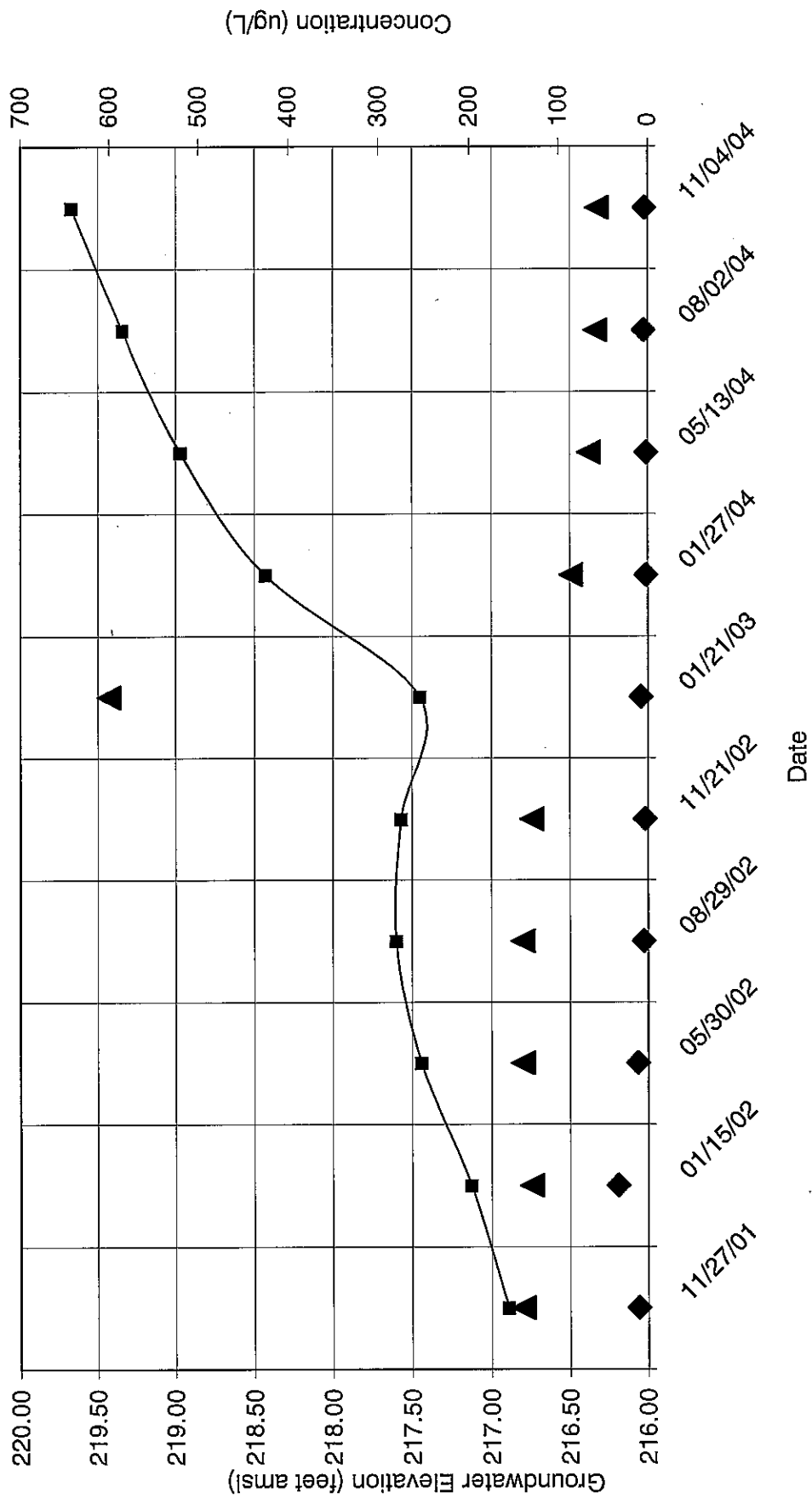
Hydrograph for MW-6
Data Series from 1998 to Present



—■— Groundwater Elevation ◆ Benzene Concentration ▲ TBA Concentration

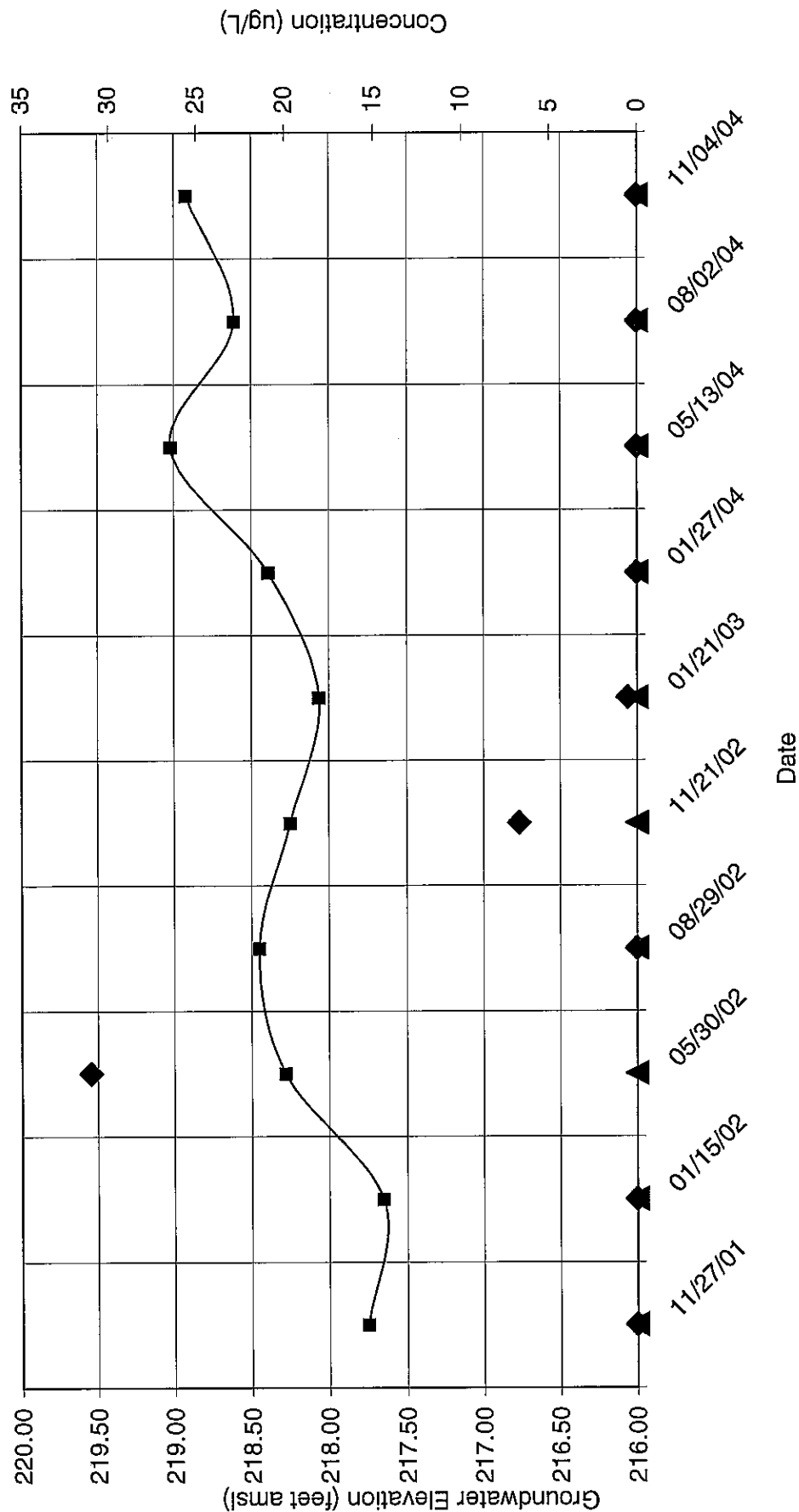
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Hydrograph for MW-7
Data Series from 2001 to Present



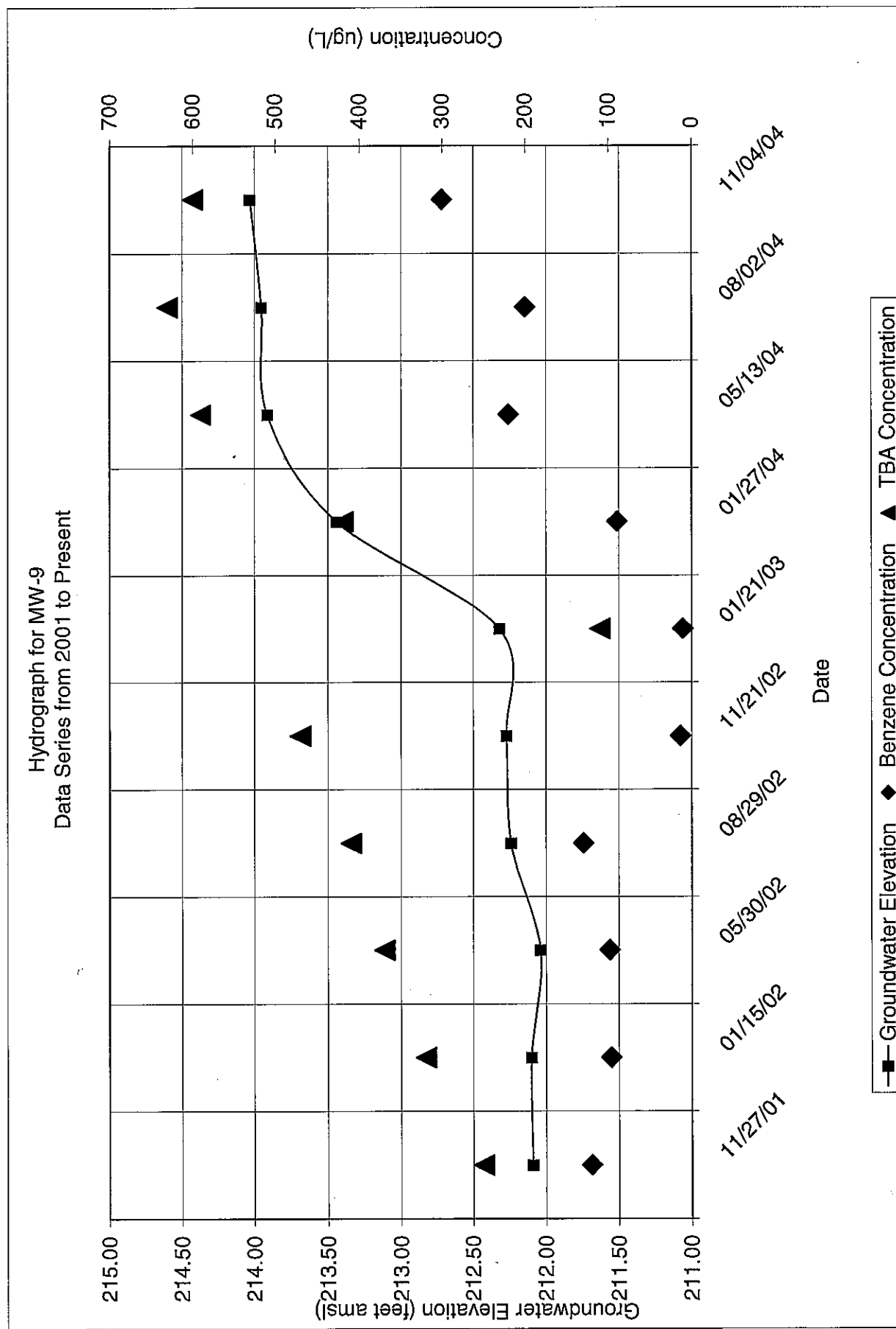
Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California

Hydrograph for MW-8
Data Series from 2001 to Present

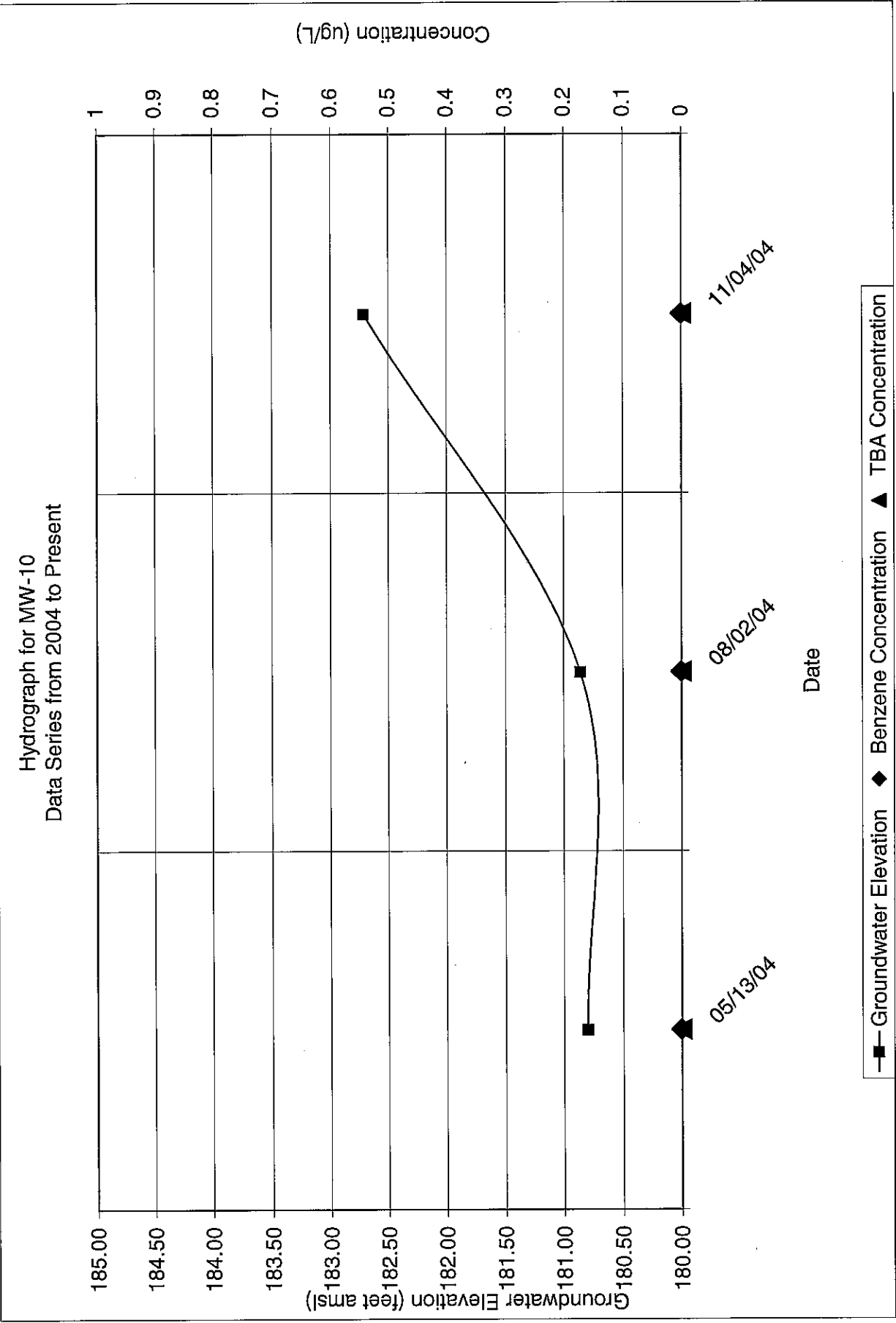


—■— Groundwater Elevation ◆ Benzene Concentration ▲ TBA Concentration

Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California



Former Chevron Service Station 9-2795, 6051 El Tordo, Rancho Santa Fe, California



APPENDIX H

Remedial Alternatives Cost Estimate Spreadsheets

Appendix H
Remedial Action Alternatives Cost Estimates
Former Chevron Station 9-2795
6051 El Tordo, Rancho Santa Fe, California

Alternatives	Regulatory Acceptance	Contaminant Fate	Permitting	Effectiveness	Long-Term Environmental Risk Liability	Cost (Estimated)	Estimated Time To Complete
Dual-Phase, High Vacuum Extraction With Mobile Remediation System	Readily acceptable. Proven technology for remediating impacted groundwater.	Contaminant is removed from the exposed smear zone and from impacted groundwater. Vapors are thermally destroyed; total fluids (groundwater) are containerized for off-site transport to a TSDF.	Air emissions discharge permits for basin-wide use within the San Diego Basin have been obtained.	Very effective for removing gasoline-locked gasoline in the thick vadose zone, if properly screened vapor extraction wells are used.	Long-term liability is reduced because hydrocarbons are destroyed. Groundwater pumping, when used alone, is unlikely to achieve the target cleanup goal (WQO for benzene, 1.0 µg/L; however, in combination with high vacuum dual phase extraction, can be effective for remediating the smear zone within the vadose zone on and near (down-gradient) of the Site..	Starting costs: \$29,000 (one event) Annual costs: \$116,000 Total Cost: \$232,000	2 years.
Remediation by Natural Attenuation and No Further Action	Accepted, if low or acceptable risk to human health and potable groundwater resources exist. Otherwise, not accepted.	Contaminant is degraded by aerobic biodegradation into harmless com-pounds through unenhanced natural processes. Degradation will take iseveral decades to complete.	Well abandonment permitting is required. Traffic control plans will be needed for all off-site monitoring wells.	Effective for reducing dissolved phase gasoline plume in saturated aquifer media, as long as microbial populations can be sustained. Process stops when oxygen or other critical nutrients are depleted.	Long-term environmental risk liability can be interpreted to be similar to that currently existing. Does achieve the target groundwater cleanup goal (WQO for benzene, 1.0 µg/L), over a period of several decades.	Groundwater Monitor Well Abandonment Costs: \$50,000 Annual Costs: None Total Cost: \$50,000	Several decades.

Notes:

TSDF = Treatment Storage and Disposal Facility

Appendix H
Remediation Strategy Cost Estimate--
Remediation by Dual-Phase, High Vacuum Extraction With Mobile Remediation System
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California

Professional Fees:

Associate	(8 hrs @ \$100.00/hr = \$800.00)
Project	(12 hrs @ \$90.00/hr = \$1,080.00)
Staff	(24 hrs @ \$78.00/hr = \$1,872.00)
Technician	(120 hrs @ \$55.00/hr @ 1 Technician = \$6,600.00)
Assistant	(15 hrs @ \$66.00/hr = \$990.00)
Total Professional Fees	\$11,342.00

SECOR Fees:

Mileage	(60 Miles @ \$0.50/Mile = \$30.00)
Equipment and Supplies	(3 each @ \$400.00/EA = \$1,200.00)
Total SECOR Fees	\$1,230.00

Subcontractor Fees

Mobile Remediation System	(1 event @ \$5,000/event = \$5,000.00)
Waste Disposal	(2,500 Gallons @ \$0.75/gallon = \$1,875.00)
Waste Profiling Sample Analysis	(7 Samples @ \$155.00/sample = \$1,085.00)
Air Sample Analysis	(10 Samples @ \$250.00/sample = \$2,500.00)
Traffic Control Plan/Equipment	\$2,500.00 lump sum
15% Mark-Up	\$1,944.00
Total Subcontractor Fees	\$14,904.00

Reporting Fees:

Mobile Remediation System Report	\$1,000.00 lump sum
Total Reporting Fees	\$1,000.00

Sub Total Cost	\$28,476.00
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NOTES:

1) Perform Mobile Remediation System activities for approximately 120 hours per event. 1 event per quarter for 2 years.

**Remediation Strategy Cost Estimate--
Remediation by Natural Attenuation
Former Chevron 9-2795
6051 El Tordo, Rancho Santa Fe, California**

Professional Fees:

Associate	(20 hrs @ \$100.00/hr = \$2,000.00)
Project	(40 hrs @ \$90.00/hr = \$3,600.00)
Staff	(40 hrs @ \$78.00/hr = \$3,120.00)
Technician	(40 hrs @ \$55.00/hr @ 1 Technician = \$2,200.00)
Assistant	(20 hrs @ \$66.00/hr = \$1,320.00)
Total Professional Fees	\$12,240.00

SECOR Fees:

Mileage	(500 Miles @ \$0.50/Mile = \$250.00)
Equipment and Supplies	(5 each @ \$400.00/EA = \$2,000.00)
Total SECOR Fees	\$2,250.00

Subcontractor Fees

Well Destruction (drilling)	(290 LF @ \$42.00/LF = \$12,180.00)
Waste Drums	(40 Drums @ \$35.00/drum = \$1,400.00)
Waste Drum Disposal	(40 Drums @ \$100.00/drum = \$4,000.00)
Disposal of Misc. Well Debris	\$1,500.00 lump sum
Asphalt Patch	(8 patches @ \$150.00/patch = \$1,200.00)
Concrete Patch	(2 patches @ \$1,500/patch = \$3,000.00)
Waste Profiling Sample Analysis	(20 Samples @ \$155.00/sample = \$3,100.00)
Traffic Control Plan/Equipment	\$3,500.00 lump sum
15% Mark-Up	\$4,482.00
Total Subcontractor Fees	\$34,362.00

Reporting Fees:

Well Destruction Report	\$1,000.00 lump sum
Total Reporting Fees	\$1,000.00

Sub Total Cost	\$49,852.00
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NOTES:

1) Perform well destruction activities for 10 wells at approximately 29 linear feet per well (e.g., 290 LF total).
Work is anticipated to take 5 days.